LANGUAGE
ITS NATURE DEVELOPMENT AND ORIGIN

4 ஜூக 1982

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ESSENTIALS OF ENGLISH GRAMMAR
THE PHILOSOPHY OF GRAMMAR
A MODERN ENGLISH GRAMMAR
(*in seven volumes*)
A SYSTEM OF GRAMMAR
HOW TO TEACH A FOREIGN LANGUAGE
AN INTERNATIONAL LANGUAGE
NOVIAL LEXIKE
CHAPTERS ON ENGLISH
MANKIND, NATION AND INDIVIDUAL
A GRAMMATICAL MISCELLANY OFFERED TO OTTO JESPERSEN

LANGUAGE

ITS NATURE, DEVELOPMENT AND ORIGIN

by

OTTO JESPERSEN

LATE PROFESSOR IN THE UNIVERSITY OF COPENHAGEN

4 - ஆக 1982

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TO

VILHELM THOMSEN

Glæde, når av andres mund
jeg hørte de tanker store,
Glæde over hvert et fund
jeg selv ved min forsken gjorde.

PREFACE

The distinctive feature of the science of language as conceived nowadays is its historical character: a language or a word is no longer taken as something given once for all, but as a result of previous development and at the same time as the starting-point for subsequent development. This manner of viewing languages constitutes a decisive improvement on the way in which languages were dealt with in previous centuries, and it suffices to mention such words as 'evolution' and 'Darwinism' to show that linguistic research has in this respect been in full accordance with tendencies observed in many other branches of scientific work during the last hundred years. Still, it cannot be said that students of language have always and to the fullest extent made it clear to themselves what is the real essence of a language. Too often expressions are used which are nothing but metaphors—in many cases perfectly harmless metaphors, but in other cases metaphors that obscure the real facts of the matter. Language is frequently spoken of as a 'living organism'; we hear of the 'life' of languages, of the 'birth' of new languages and of the 'death' of old languages, and the implication, though not always realized, is that a language is a living thing, something analogous to an animal or a plant. Yet a language evidently has no separate existence in the same way as a dog or a beech has, but is nothing but a function of certain living human beings. Language is activity, purposeful activity, and we should never lose sight of the speaking individuals and of their purpose in acting in this particular way. When people speak of the life of words—as in celebrated books with such titles as *La vie des mots*, or *Biographies of Words*—they do not always keep in view that a word has no 'life' of its own: it exists only in so far as it is pronounced or heard or remembered by somebody, and this kind of existence cannot properly be compared with 'life' in the original and proper sense of that word. The only unimpeachable definition of a word is that it is a human habit, an habitual act on the part of one human individual which has, or may have, the effect of evoking some idea in the mind

of another individual. A word thus may be rightly compared with such an habitual act as taking off one's hat or raising one's fingers to one's cap: in both cases we have a certain set of muscular activities which, when seen or heard by somebody else, shows him what is passing in the mind of the original agent or what he desires to bring to the consciousness of the other man (or men). The act is individual, but the interpretation presupposes that the individual forms part of a community with analogous habits, and a language thus is seen to be one particular set of human customs of a well-defined social character.

It is indeed possible to speak of 'life' in connexion with language even from this point of view, but it will be in a different sense from that in which the word was taken by the older school of linguistic science. I shall try to give a biological or biographical science of language, but it will be through sketching the linguistic biology or biography of the speaking individual. I shall give, therefore, a large part to the way in which a child learns his mother-tongue (Book II): my conclusions there are chiefly based on the rich material I have collected during many years from direct observation of many Danish children, and particularly of my own boy, Frans (see my book *Nutidssprog hos börn og voxne*, Copenhagen, 1916). Unfortunately, I have not been able to make first-hand observations with regard to the speech of English children; the English examples I quote are taken second-hand either from notes, for which I am obliged to English and American friends, or from books, chiefly by psychologists. I should be particularly happy if my remarks could induce some English or American linguist to take up a systematic study of the speech of children, or of one child. This study seems to me very fascinating indeed, and a linguist is sure to notice many things that would be passed by as uninteresting even by the closest observer among psychologists, but which may have some bearing on the life and development of language.

Another part of linguistic biology deals with the influence of the foreigner, and still another with the changes which the individual is apt independently to introduce into his speech even after he has fully acquired his mother-tongue. This naturally leads up to the question whether all these changes introduced by various individuals do, or do not, follow the same line of direction, and whether mankind has on the whole moved forward or not in linguistic matters. The conviction reached through a study of historically accessible periods of well-known languages is finally shown to throw some light on the disputed problem of the ultimate origin of human language.

Parts of my theory of sound-change, and especially my objections

to the dogma of blind sound-laws, date back to my very first linguistic paper (1886); most of the chapters on Decay or Progress and parts of some of the following chapters, as well as the theory of the origin of speech, may be considered a new and revised edition of the general chapters of my *Progress in Language* (1894). Many of the ideas contained in this book thus are not new with me; but even if a reader of my previous works may recognize things which he has seen before, I hope he will admit that they have been here worked up with much new material into something like a system, which forms a fairly comprehensive theory of linguistic development.

Still, I have not been able to compress into this volume the whole of my philosophy of speech. Considerations of space have obliged me to exclude the chapters I had first intended to write on the practical consequences of the 'energetic' view of language which I have throughout maintained; the estimation of linguistic phenomena implied in that view has bearings on such questions as these: What is to be considered 'correct' or 'standard' in matters of pronunciation, spelling, grammar and idiom? Can (or should) individuals exert themselves to improve their mother-tongue by enriching it with new terms and by making it purer, more precise, more fit to express subtle shades of thought, more easy to handle in speech or in writing, etc.? (A few hints on such questions may be found in my paper "Energetik der Sprache" in *Scientia*, 1914.) Is it possible to construct an artificial language on scientific principles for international use? (On this question I may here briefly state my conviction that it is extremely important for the whole of mankind to have such a language, and that Ido is scientifically and practically very much superior to all previous attempts, Volapük, Esperanto, Idiom Neutral, Latin sine flexione, etc. But I have written more at length on that question elsewhere.) With regard to the system of grammar, the relation of grammar to logic, and grammatical categories and their definition, I must refer the reader to *Sprogets Logik* (Copenhagen, 1913), and to the first chapter of the second volume of my *Modern English Grammar* (Heidelberg, 1914), but I shall hope to deal with these questions more in detail in a future work, to be called, probably, *The Logic of Grammar*, of which some chapters have been ready in my drawers for some years and others are in active preparation.

I have prefixed to the theoretical chapters of this work a short survey of the history of the science of language in order to show how my problems have been previously treated. In this part (Book I) I have, as a matter of course, used the excellent works on the subject by Benfey, Raumer, Delbrück (*Einleitung in das Sprachstudium*, 1st ed., 1880; I did not see the 5th ed., 1908, till

my own chapters on the history of linguistics were finished), Thomsen, Oertel and Pedersen. But I have in nearly every case gone to the sources themselves, and have, I think, found interesting things in some of the early books on linguistics that have been generally overlooked; I have even pointed out some writers who had passed into undeserved oblivion. My intention has been on the whole to throw into relief the great lines of development rather than to give many details; in judging the first part of my book it should also be borne in mind that its object primarily is to serve as an introduction to the problems dealt with in the rest of the book. Throughout I have tried to look at things with my own eyes, and accordingly my views on a great many points are different from those generally accepted; it is my hope that an impartial observer will find that I have here and there succeeded in distributing light and shade more justly than my predecessors.

Wherever it has been necessary I have transcribed words phonetically according to the system of the *Association Phonétique Internationale*, though without going into too minute distinction of sounds, the object being, not to teach the exact pronunciation of various languages, but rather to bring out clearly the insufficiency of the ordinary spelling. The latter is given throughout in italics, while phonetic symbols have been inserted in brackets [ ]. I must ask the reader to forgive inconsistency in such matters as Greek accents, Old English marks of vowel-length, etc., which I have often omitted as of no importance for the purpose of this volume.

I must express here my gratitude to the directors of the Carlsbergfond for kind support of my work. I want to thank also Professor G. C. Moore Smith, of the University of Sheffield: not only has he sent me the manuscript of a translation of most of my *Nutidssprog*, which he had undertaken of his own accord and which served as the basis of Book II, but he has kindly gone through the whole of this volume, improving and correcting my English style in many passages. His friendship and the untiring interest he has always taken in my work have been extremely valuable to me for a great many years.

OTTO JESPERSEN.

University of Copenhagen,
June 1921.

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ABBREVIATIONS OF BOOK TITLES, ETC.

Bally LV = Ch. Bally, *Le Langage et la Vie*, Genève 1913.
Benfey Gesch = Th. Benfey, *Geschichte der Sprachwissenschaft*, München 1869.
Bleek CG = W. H. I. Bleek, *Comparative Grammar of South African Languages* London 1862–69.
Bloomfield SL = L. Bloomfield, *An Introduction to the Study of Language*, New York 1914.
Bopp C = F. Bopp, *Conjugationssystem der Sanskritsprache*, Frankfurt 1816.
AC = *Analytical Comparison* (see ch. ii, § 6).
VG = *Vergleichende Grammatik*, 2te Ausg., Berlin 1857.
Bréal M = M. Bréal, *Mélanges de Mythologie et de Linguistique*, Paris 1882.
Brugmann VG = K. Brugmann, *Grundriss der Vergleichenden Grammatik*, Strassburg 1886 ff., 2te Ausg., 1897 ff.
KG = *Kurze Vergleichende Grammatik*, Strassburg 1904.
ChE = O. Jespersen, *Chapters on English*, London 1918.
Churchill B = W. Churchill, *Beach-la-Mar*, Washington 1911.
Curtius C = G. Curtius, *Zur Chronologie der indogerm. Sprachforschung*, Leipzig 1873.
K = *Zur Kritik der neuesten Sprachforschung*, Leipzig 1885.
Dauzat V = A. Dauzat, *La Vie du Langage*, Paris 1910.
Ph = *La Philosophie du Langage*, Paris 1912.
Delbrück E = B. Delbrück, *Einleitung in das Sprachstudium*, Leipzig 1880; 5te Aufl. 1908.
Grfr = *Grundfragen der Sprachforschung*, Strassburg 1901.
E. = English.
EDD = J. Wright, *The English Dialect Dictionary*, Oxford 1898 ff.
ESt = *Englische Studien*.
Feist KI = S. Feist, *Kultur, Ausbreitung und Herkunft der Indogermanen*, Berlin 1913.
Fonetik = O. Jespersen, *Fonetik*, Copenhagen 1897.
Fr. = French.
Gabelentz Spr = G. v. d. Gabelentz, *Die Sprachwissenschaft*, Leipzig 1891.
Gr = *Chinesische Grammatik*, Leipzig 1881.
Ginneken LP = J. v. Ginneken, *Principes de Linguistique Psychologique*, Amsterdam, Paris 1907.
Glenconner = P. Glenconner, *The Sayings of the Children*, Oxford 1918.
Gr. = Greek.
Greenough and Kittredge W = J. B. Greenough and G. L. Kittredge, *Words and their Ways in English Speech*, London 1902.
Grimm Gr. = J. Grimm, *Deutsche Grammatik*, 2te Ausg., Göttingen 1822.
GDS = *Geschichte der deutschen Sprache*, 4te Aufl., Leipzig 1880.

GRM = *Germanisch-Romanische Monatsschrift.*
GS = O. Jespersen, *Growth and Structure of the English Language*, 3rd ed. Leipzig 1919.
Hilmer Sch = H. Hilmer, *Schallnachahmung, Wortschöpfung u. Bedeutungswandel*, Halle 1914.
Hirt GDS = H. Hirt, *Geschichte der deutschen Sprache*, München 1919.
Idg = *Die Indogermanen*, Strassburg 1905–7.
Humboldt Versch = W. v. Humboldt, *Verschiedenheit des menschlichen Sprachbaues* (number of pages as in the original edition).
IF = *Indogermanische Forschungen.*
KZ = Kuhn's *Zeitschrift für vergleichende Sprachforschung.*
Lasch S = R. Lasch, *Sondersprachen u. ihre Entstehung*, Wien 1907.
LPh = O. Jespersen, *Lehrbuch der Phonetik*, 3te Aufl., Leipzig 1920.
Madvig 1857 = J. N. Madvig, *De grammatische Betegnelser*, Copenhagen 1857.
Kl = *Kleine philologische Schriften*, Leipzig 1875.
ME. = Middle English.
MEG = O. Jespersen, *Modern English Grammar*, Heidelberg 1909, 1914.
Meillet DI = A. Meillet, *Les Dialectes Indo-Européens*, Paris 1908.
Germ. = *Caractères généraux des Langues Germaniques*, Paris 1917.
Gr = *Aperçu d'une Histoire de la Langue Grecque*, Paris 1913.
LI = *Introduction à l'étude comp. des Langues Indo-Européennes*, 2e éd., Paris 1908.
Meinhof Ham = C. Meinhof, *Die hamitischen Sprachen*, Hamburg 1912.
MSA = *Die moderne Sprachforschung in Afrika*, Berlin 1910.
Meringer L = R. Meringer, *Aus dem Leben der Sprache*, Berlin 1908.
Misteli = F. Misteli, *Charakteristik der haupts. Typen des Sprachbaues*, Berlin 1893.
MSL = *Mémoires de la Société de Linguistique de Paris.*
Fr. Müller Gr = Friedrich Müller, *Grundriss der Sprachwissenschaft*, Wien 1876 ff.
Max Müller Ch = F. Max Müller, *Chips from a German Workshop*, vol. iv, London 1875.
NED = *A New English Dictionary*, by Murray, etc., Oxford 1884 ff.
Noreen UL = A. Noreen, *Abriss der urgermanischen Lautlehre*, Strassburg 1894.
VS = *Vårt Språk*, Lund 1903 ff.
Nyrop Gr = Kr. Nyrop, *Grammaire Historique de la Langue Française*, Copenhagen 1914 ff.
OE. = Old English (Anglo-Saxon).
Oertel = H. Oertel, *Lectures on the Study of Language*, New York 1901.
OFr. = Old French.
ON. = Old Norse.
Passy Ch = P. Passy, *Les Changements Phonétiques*, Paris 1890.
Paul P = H. Paul, *Prinzipien der Sprachgeschichte*, 4te Aufl., Halle 1909.
Gr = *Grundriss der germanischen Philologie.*
PBB = *Beitrage zur Geschichte der deutschen Sprache* (Paul u. Braune).
Pedersen GKS = H. Pedersen, *Vergl. Grammatik der keltischen Sprachen*, Göttingen 1909.
PhG = O. Jespersen, *Phonetische Grundfragen*, Leipzig 1904.
Porzezinski Spr = V. Porzezinski, *Einleitung in die Sprachwissenschaft*, Leipzig 1910.
Progr. = O. Jespersen, *Progress in Language*, London 1894.

Rask P = R. Rask [Prisskrift] *Undersögelse om det gamle Nordiske Sprogs Oprindelse*, Copenhagen 1818.
SA = *Samlede Afhandlinger*, Copenhagen 1834.
Raumer Gesch = R. v. Raumer, *Geschichte der germanischen Philologie*, München 1870.
Ronjat = J. Ronjat, *Le Développement du Langage chez un Enfant Bilingue*, Paris 1913.
Sandfeld Jensen S = Kr. Sandfeld Jensen, *Sprogvidenskaben*, Copenhagen 1913.
Sprw = *Die Sprachwissenschaft*, Leipzig 1915.
Saussure LG = F. de Saussure, *Cours de Linguistique Générale*, Lausanne 1916.
Sayce P = A. H. Sayce, *Principles of Comparative Philology*, 2nd ed., London 1875.
S = *Introduction to the Science of Language*, London 1880.
Scherer GDS = W. Scherer, *Zur Geschichte der deutschen Sprache*, Berlin 1878.
Schleicher I, II = A. Schleicher, *Sprachvergleichende Untersuchungen*, I–II, Bonn 1848, 1850.
Bed. = *Die Bedeutung der Sprache*, Weimar 1865.
C = *Compendium der vergl. Grammatik*, 4te Aufl., Weimar 1876.
D = *Die deutsche Sprache*, Stuttgart 1860.
Darw. = *Die Darwinische Theorie und die Sprachwissenschaft*, Weimar 1873.
NV = *Nomen und Verbum*, Leipzig 1865.
Schuchardt SlD = H. Schuchardt, *Slawo-Deutsches u. Slawo-Italienisches*, Graz 1885.
KS = *Kreolische Studien* (Wien, Akademie).
Simonyi US = S. Simonyi, *Die Ungarische Sprache*, Strassburg 1907.
Skt. = Sanskrit.
Sommer Lat. = F. Sommer, *Handbuch der latein. Laut- und Formenlehre*, Heidelberg 1902.
Stern = Clara and William Stern, *Die Kindersprache*, Leipzig 1907.
Stoffel Int. = C. Stoffel, *Intensives and Down-toners*, Heidelberg 1901.
Streitberg Gesch = W. Streitberg, *Geschichte der indogerm. Sprachwissenschaft*, Strassburg 1917.
Urg = *Urgermanische Grammatik*, Heidelberg 1896.
Sturtevant LCh = E. H. Sturtevant, *Linguistic Change*, Chicago 1917.
Sütterlin WSG = L. Sütterlin, *Das Wesen der sprachlichen Gebilde*, Heidelberg 1902.
WW = *Werden und Wesen der Sprache*, Leipzig 1913.
Sweet CP = H. Sweet, *Collected Papers*, Oxford 1913.
H = *The History of Language*, London 1900.
PS = *The Practical Study of Languages*, London 1899.
Tegnér SM = E. Tegnér, *Språkets makt öfver tanken*, Stockholm 1880.
Verner = K. Verner, *Afhandlinger og Breve*, Copenhagen 1903.
Wechssler L = E. Wechssler, *Giebt es Lautgesetze?* Halle 1900.
Whitney G = W. D. Whitney, *Life and Growth of Language*, London 1875
L = *Language and the Study of Language*, London 1868.
M = *Max Müller and the Science of Language*, New York 1892.
OLS = *Oriental and Linguistic Studies*, New York 1873–4.
Wundt S = W. Wundt, *Die Sprache*, Leipzig 1900.

PHONETIC SYMBOLS

ˈ stands before the stressed syllable.

· indicates length of the preceding sound.

[a·] as in *a*lms.
[ai] as in *i*ce.
[au] as in h*ou*se.
[æ] as in h*a*t.
[ei] as in h*a*te.
[ɛ] as in c*a*re; Fr. t*e*l.
[ə] indistinct vowels.
[i] as in f*i*ll; Fr. qu*i*.
[i·] as in f*ee*l; Fr. f*i*lle.
[o] as in Fr. s*eau*.
[ou] as in s*o*.
[ɔ] open *o*-sounds.
[u] as in f*u*ll; Fr. f*ou*.
[u·] as in f*oo*l; Fr. ép*ou*se.
[y] as in Fr. v*u*.
[ʌ] as in c*u*t.
[ø] as in Fr. f*eu*.
[œ] as in Fr. s*œu*r.
[˜] French nasalization.
[c] as in G. ic*h*.
[x] as in G., Sc. loc*h*.
[ð] as in *th*is.
[j] as in *y*ou.
[þ] as in *th*ick.
[ʃ] as in *sh*e.
[ʒ] as in mea*s*ure.
[ʼ] in Russian palatalization, in Danish glottal stop.

BOOK I

HISTORY OF LINGUISTIC SCIENCE

CHAPTER I

BEFORE 1800

§ 1. Antiquity. § 2. Middle Ages and Renaissance. § 3. Eighteenth-century Speculation. Herder. § 4. Jenisch.

I.—§ 1. Antiquity.

THE science of language began, tentatively and approximately, when the minds of men first turned to problems like these: How is it that people do not speak everywhere the same language? How were words first created? What is the relation between a name and the thing it stands for? Why is such and such a person, or such and such a thing, called *this* and not *that*? The first answers to these questions, like primitive answers to other riddles of the universe, were largely theological: God, or one particular god, had created language, or God led all animals to the first man in order that he might give them names. Thus in the Old Testament the diversity of languages is explained as a punishment from God for man's crimes and presumption. These were great and general problems, but the minds of the early Jews were also occupied with smaller and more particular problems of language, as when etymological interpretations were given of such personal names as were not immediately self-explanatory.

The same predilection for etymology, and a similar primitive kind of etymology, based entirely on a more or less accidental similarity of sound and easily satisfied with any fanciful connexion in sense, is found abundantly in Greek writers and in their Latin imitators. But to the speculative minds of Greek thinkers the problem that proved most attractive was the general and abstract one, Are words natural and necessary expressions of the notions underlying them, or are they merely arbitrary and conventional signs for notions that might have been equally well expressed by any other sounds? Endless discussions were carried on about this question, as we see particularly from Plato's *Kratylos*, and no very definite result was arrived at, nor could any be expected so long as one language only formed the basis of the discussion—even in our own days, after a century of comparative philology, the question still remains an open one. In Greece, the two catch-words *phúsei* (by nature) and *thései* (by convention) for centuries

divided philosophers and grammarians into two camps, while some, like Sokrates in Plato's dialogue, though admitting that in language as actually existing there was no natural connexion between word and thing, still wished that an ideal language might be created in which words and things would be tied together in a perfectly rational way—thus paving the way for Bishop Wilkins and other modern constructors of philosophical languages.

Such abstract and *a priori* speculations, however stimulating and clever, hardly deserve the name of science, as this term is understood nowadays. Science presupposes careful observation and systematic classification of facts, and of that in the old Greek writers on language we find very little. The earliest masters in linguistic observation and classification were the old Indian grammarians. The language of the old sacred hymns had become in many points obsolete, but religion required that not one iota of these revered texts should be altered, and a scrupulous oral tradition kept them unchanged from generation to generation in every minute particular. This led to a wonderfully exact analysis of speech sounds, in which every detail of articulation was carefully described, and to a no less admirable analysis of grammatical forms, which were arranged systematically and described in a concise and highly ingenious, though artificial, terminology. The whole manner of treatment was entirely different from the methods of Western grammarians, and when the works of Panini and other Sanskrit grammarians were first made known to Europeans in the nineteenth century, they profoundly influenced our own linguistic science, as witnessed, among other things, by the fact that some of the Indian technical terms are still extensively used, for instance those describing various kinds of compound nouns.

In Europe grammatical science was slowly and laboriously developed in Greece and later in Rome. Aristotle laid the foundation of the division of words into "parts of speech" and introduced the notion of case (*ptôsis*). His work in this connexion was continued by the Stoics, many of whose grammatical distinctions and terms are still in use, the latter in their Latin dress, which embodies some curious mistakes, as when *genikê*, "the case of kind or species," was rendered *genitivus*, as if it meant "the case of origin," or, worse still, when *aitiatikê*, "the case of object," was rendered *accusativus*, as if from *aitiáomai*, 'I accuse.' In later times the philological school of Alexandria was particularly important, the object of research being the interpretation of the old poets, whose language was no longer instantly intelligible. Details of flexion and of the meaning of words were described and referred to the two categories of analogy or regularity and anomaly or irregularity, but real insight into the nature of language

made very little progress either with the Alexandrians or with their Roman inheritors, and etymology still remained in the childlike stage.

I.—§ 2. Middle Ages and Renaissance.

Nor did linguistic science advance in the Middle Ages. The chief thing then was learning Latin as the common language of the Church and of what little there was of civilization generally; but Latin was not studied in a scientific spirit, and the various vernacular languages, which one by one blossomed out into languages of literature, even less so.

The Renaissance in so far brought about a change in this, as it widened the horizon, especially by introducing the study of Greek. It also favoured grammatical studies through the stress it laid on correct Latin as represented in the best period of classical literature: it now became the ambition of humanists in all countries to write Latin like Cicero. In the following centuries we witness a constantly deepening interest in the various living languages of Europe, owing to the growing importance of native literatures and to increasing facilities of international traffic and communication in general. The most important factor here was, of course, the invention of printing, which rendered it incomparably more easy than formerly to obtain the means of studying foreign languages. It should be noted also that in those times the prevalent theological interest made it a much more common thing than nowadays for ordinary scholars to have some knowledge of Hebrew as the original language of the Old Testament. The acquaintance with a language so different in type from those spoken in Europe in many ways stimulated the interest in linguistic studies, though on the other hand it proved a fruitful source of error, because the position of the Semitic family of languages was not yet understood, and because Hebrew was thought to be the language spoken in Paradise, and therefore imagined to be the language from which all other languages were descended. All kinds of fanciful similarities between Hebrew and European languages were taken as proofs of the origin of the latter; every imaginable permutation of sounds (or rather of letters) was looked upon as possible so long as there was a slight connexion in the sense of the two words compared, and however incredible it may seem nowadays, the fact that Hebrew was written from right to left, while we in our writing proceed from left to right, was considered justification enough for the most violent transposition of letters in etymological explanations. And yet all these flighty and whimsical comparisons served perhaps in some measure to

pave the way for a more systematic treatment of etymology through collecting vast stores of words from which sober and critical minds might select those instances of indubitable connexion on which a sound science of etymology could eventually be constructed.

The discovery and publication of texts in the old Gothonic (Germanic) languages, especially Wulfila's Gothic translation of the Bible, compared with which Old English (Anglo-Saxon), Old German and Old Icelandic texts were of less, though by no means of despicable, account, paved the way for historical treatment of this important group of languages in the seventeenth and eighteenth centuries. But on the whole, the interest in the history of languages in those days was small, and linguistic thinkers thought it more urgent to establish vast treasuries of languages as actually spoken than to follow the development of any one language from century to century. Thus we see that the great philosopher Leibniz, who took much interest in linguistic pursuits and to whom we owe many judicious utterances on the possibility of a universal language, instigated Peter the Great to have vocabularies and specimens collected of all the various languages of his vast empire. To this initiative taken by Leibniz, and to the great personal interest that the Empress Catherine II took in these studies, we owe, directly or indirectly, the great repertories of all languages then known, first Pallas's *Linguarum totius orbis vocabularia comparativa* (1786–87), then Hervas's *Catálogo de las lenguas de las naziones conocidas* (1800–5), and finally Adelung's *Mithridates oder allgemeine Sprachenkunde* (1806–17). In spite of their inevitable shortcomings, their uncritical and unequal treatment of many languages, the preponderance of lexical over grammatical information, and the use of biblical texts as their sole connected illustrations, these great works exercised a mighty influence on the linguistic thought and research of the time, and contributed very much to the birth of the linguistic science of the nineteenth century. It should not be forgotten, moreover, that Hervas was one of the first to recognize the superior importance of grammar to vocabulary for deciding questions of relationship between languages.

It will be well here to consider the manner in which languages and the teaching of languages were generally viewed during the centuries preceding the rise of Comparative Linguistics. The chief language taught was Latin; the first and in many cases the only grammar with which scholars came into contact was Latin grammar. No wonder therefore that grammar and Latin grammar came in the minds of most people to be synonyms. Latin grammar played an enormous rôle in the schools, to the exclusion of many subjects (the pupil's own native language, science, history, etc.)

which we are now beginning to think more essential for the education of the young. The traditional term for 'secondary school' was in England 'grammar school' and in Denmark 'latinskole,' and the reason for both expressions was obviously the same. Here, however, we are concerned with this privileged position of Latin grammar only in so far as it influenced the treatment of languages in general. It did so in more ways than one.

Latin was a language with a wealth of flexional forms, and in describing other languages the same categories as were found in Latin were applied as a matter of course, even where there was nothing in these other languages which really corresponded to what was found in Latin. In English and Danish grammars paradigms of noun declension were given with such cases as accusative, dative and ablative, in spite of the fact that no separate forms for these cases had existed for centuries. All languages were indiscriminately saddled with the elaborate Latin system of tenses and moods in the verbs, and by means of such Procrustean methods the actual facts of many languages were distorted and misrepresented. Discriminations which had no foundation in reality were nevertheless insisted on, while discriminations which happened to be non-existent in Latin were apt to be overlooked. The mischief consequent on this unfortunate method of measuring all grammar after the pattern of Latin grammar has not even yet completely disappeared, and it is even now difficult to find a single grammar of any language that is not here and there influenced by the Latin bias.

Latin was chiefly taught as a written language (witness the totally different manner in which Latin was pronounced in the different countries, the consequence being that as early as the sixteenth century French and English scholars were unable to understand each other's spoken Latin). This led to the almost exclusive occupation with letters instead of sounds. The fact that all language is primarily spoken and only secondarily written down, that the real life of language is in the mouth and ear and not in the pen and eye, was overlooked, to the detriment of a real understanding of the essence of language and linguistic development; and very often where the spoken form of a language was accessible scholars contented themselves with a reading knowledge. In spite of many efforts, some of which go back to the sixteenth century, but which did not become really powerful till the rise of modern phonetics in the nineteenth century, the fundamental significance of spoken as opposed to written language has not yet been fully appreciated by all linguists. There are still too many writers on philological questions who have evidently never tried to think in sounds instead of thinking in letters and symbols,

and who would probably be sorely puzzled if they were to pronounce all the forms that come so glibly to their pens. What Sweet wrote in 1877 in the preface to his *Handbook of Phonetics* is perhaps less true now than it was then, but it still contains some elements of truth. "Many instances," he said, "might be quoted of the way in which important philological facts and laws have been passed over or misrepresented through the observer's want of phonetic training. Schleicher's failing to observe the Lithuanian accents, or even to comprehend them when pointed out by Kurschat, is a striking instance." But there can be no doubt that the way in which Latin has been for centuries made the basis of all linguistic instruction is largely responsible for the preponderance of eye-philology to ear-philology in the history of our science.

We next come to a point which to my mind is very important, because it concerns something which has had, and has justly had, enduring effects on the manner in which language, and especially grammar, is viewed and taught to this day. What was the object of teaching Latin in the Middle Ages and later? Certainly not the purely scientific one of imparting knowledge for knowledge's own sake, apart from any practical use or advantage, simply in order to widen the spiritual horizon and to obtain the joy of pure intellectual understanding. For such a purpose some people with scientific leanings may here and there take up the study of some out-of-the-way African or American idiom. But the reasons for teaching and learning Latin were not so idealistic. Latin was not even taught and learnt solely with the purpose of opening the doors to the old classical or to the more recent religious literature in that language, but chiefly, and in the first instance, because Latin was a practical and highly important means of communication between educated people. One had to learn not only to read Latin, but also to write Latin, if one wanted to maintain no matter how humble a position in the republic of learning or in the hierarchy of the Church. Consequently, grammar was not (even primarily) the science of how words were inflected and how forms were used by the old Romans, but chiefly and essentially the art of inflecting words and of using the forms yourself, if you wanted to write correct Latin. This you must say, and these faults you must avoid—such were the lessons imparted in the schools. Grammar was not a set of facts observed but of rules to be observed, and of paradigms, i.e. of patterns, to be followed. Sometimes this character of grammatical instruction is expressly indicated in the form of the precepts given, as in such memorial verses as this: "Tolle *-me, -mi, -mu, -mis,* Si declinare *domus* vis!" In other words, grammar was *prescriptive* rather than *descriptive*.

The current definition of grammar, therefore, was "ars bene dicendi et bene scribendi," "l'art de bien dire et de bien écrire," the art of speaking and writing correctly. J. C. Scaliger said, "Grammatici unus finis est recte loqui." To attain to correct diction ('good grammar') and to avoid faulty diction ('bad grammar'), such were the two objects of grammatical teaching. Now, the same point of view, in which the two elements of 'art' and of 'correctness' entered so largely, was applied not only to Latin, but to other languages as well, when the various vernaculars came to be treated grammatically.

The vocabulary, too, was treated from the same point of view. This is especially evident in the case of the dictionaries issued by the French and Italian Academies. They differ from dictionaries as now usually compiled in being not collections of all and any words their authors could get hold of within the limits of the language concerned, but in being selections of words deserving the recommendations of the best arbiters of taste and therefore fit to be used in the highest literature by even the most elegant or fastidious writers. Dictionaries thus understood were less descriptions of actual usage than prescriptions for the best usage of words.

The normative way of viewing language is fraught with some great dangers which can only be avoided through a comprehensive knowledge of the historic development of languages and of the general conditions of linguistic psychology. Otherwise, the tendency everywhere is to draw too narrow limits for what is allowable or correct. In many cases one form, or one construction, only is recognized, even where two or more are found in actual speech; the question which is to be selected as the only good form comes to be decided too often by individual fancy or predilection, where no scientific tests can yet be applied, and thus a form may often be proscribed which from a less narrow point of view might have appeared just as good as, or even better than, the one preferred in the official grammar or dictionary. In other instances, where two forms were recognized, the grammarian wanted to give rules for their discrimination, and sometimes on the basis of a totally inadequate induction he would establish nice distinctions not really warranted by actual usage—distinctions which subsequent generations had to learn at school with the sweat of their brows and which were often considered most important in spite of their intrinsic insignificance. Such unreal or half-real subtle distinctions are the besetting sin of French grammarians from the 'grand siècle' onwards, while they have played a much less considerable part in England, where people have been on the whole more inclined to let things slide as best they may on the

'laissez faire' principle, and where no Academy was ever established to regulate language. But even in English rules are not unfrequently given in schools and in newspaper offices which are based on narrow views and hasty generalizations. Because a preposition at the end of a sentence may in some instances be clumsy or unwieldy, this is no reason why a final preposition should always and under all circumstances be considered a grave error. But it is of course easier for the schoolmaster to give an absolute and inviolable rule once and for all than to study carefully all the various considerations that might render a qualification desirable. If the ordinary books on *Common Faults in Writing and Speaking English* and similar works in other languages have not even now assimilated the teachings of Comparative and Historic Linguistics, it is no wonder that the grammarians of the seventeenth and eighteenth centuries, with whom we are here concerned, should be in many ways guided by narrow and insufficient views on what ought to determine correctness of speech.

Here also the importance given to the study of Latin was sometimes harmful; too much was settled by a reference to Latin rules, even where the modern languages really followed rules of their own that were opposed to those of Latin. The learning of Latin grammar was supposed to be, and to some extent really was, a schooling in logic, as the strict observance of the rules of any foreign language is bound to be; but the consequence of this was that when questions of grammatical correctness were to be settled, too much importance was often given to purely logical considerations, and scholars were sometimes apt to determine what was to be called 'logical' in language according to whether it was or was not in conformity with Latin usage. This disposition, joined with the unavoidable conservatism of mankind, and more particularly of teachers, would in many ways prove a hindrance to natural developments in a living speech. But we must again take up the thread of the history of linguistic theory.

I.—§ 3. Eighteenth-century Speculation. Herder.

The problem of a natural origin of language exercised some of the best-known thinkers of the eighteenth century. Rousseau imagined the first men setting themselves more or less deliberately to frame a language by an agreement similar to (or forming part of) the *contrat social* which according to him was the basis of all social order. There is here the obvious difficulty of imagining how primitive men who had been previously without any speech came to feel the want of language, and how they could agree on what sound was to represent what idea without having already

some means of communication. Rousseau's whole manner of putting and of viewing the problem is evidently too crude to be of any real importance in the history of linguistic science.

Condillac is much more sensible when he tries to imagine how a speechless man and a speechless woman might be led quite naturally to acquire something like language, starting with instinctive cries and violent gestures called forth by strong emotions. Such cries would come to be associated with elementary feelings, and new sounds might come to indicate various objects if produced repeatedly in connexion with gestures showing what objects the speaker wanted to call attention to. If these two first speaking beings had as yet very little power to vary their sounds, their child would have a more flexible tongue, and would therefore be able to, and be impelled to, produce some new sounds, the meaning of which his parents would guess at, and which they in their turn would imitate; thus gradually a greater and greater number of words would come into existence, generation after generation working painfully to enrich and develop what had been already acquired, until it finally became a real language.

The profoundest thinker on these problems in the eighteenth century was Johann Gottfried Herder, who, though he did little or nothing in the way of scientific research, yet prepared the rise of linguistic science. In his prize essay on the *Origin of Language* (1772) Herder first vigorously and successfully attacks the orthodox view of his age—a view which had been recently upheld very emphatically by one Süssmilch—that language could not have been invented by man, but was a direct gift from God. One of Herder's strongest arguments is that if language had been framed by God and by Him instilled into the mind of man, we should expect it to be much more logical, much more imbued with pure reason than it is as an actual matter of fact. Much in all existing languages is so chaotic and ill-arranged that it could not be God's work, but must come from the hand of man. On the other hand, Herder does not think that language was really 'invented' by man—although this was the word used by the Berlin Academy when opening the competition in which Herder's essay gained the prize. Language was not deliberately framed by man, but sprang of necessity from his innermost nature; the genesis of language according to him is due to an impulse similar to that of the mature embryo pressing to be born. Man, in the same way as all animals, gives vent to his feelings in tones, but this is not enough; it is impossible to trace the origin of human language to these emotional cries alone. However much they may be refined and fixed, without understanding they can never become human, conscious language. Man differs from brute animals not in degree or in the addition of

new powers, but in a totally different direction and development of all powers. Man's inferiority to animals in strength and sureness of instinct is compensated by his wider sphere of attention; the whole disposition of his mind as an unanalysable entity constitutes the impassable barrier between him and the lower animals. Man, then, shows conscious reflexion when among the ocean of sensations that rush into his soul through all the senses he singles out one wave and arrests it, as when, seeing a lamb, he looks for a distinguishing mark and finds it in the bleating, so that next time when he recognizes the same animal he imitates the sound of bleating, and thereby creates a name for that animal. Thus the lamb to him is 'the bleater,' and nouns are created from verbs, whereas, according to Herder, if language had been the creation of God it would inversely have begun with nouns, as that would have been the logically ideal order of procedure. Another characteristic trait of primitive languages is the crossing of various shades of feeling and the necessity of expressing thoughts through strong, bold metaphors, presenting the most motley picture. "The genetic cause lies in the poverty of the human mind and in the flowing together of the emotions of a primitive human being." Another consequence is the wealth of synonyms in primitive language; "alongside of real poverty it has the most unnecessary superfluity."

When Herder here speaks of primitive or 'original' languages, he is thinking of Oriental languages, and especially of Hebrew. "We should never forget," says Edward Sapir,[1] "that Herder's time-perspective was necessarily very different from ours. While we unconcernedly take tens or even hundreds of thousands of years in which to allow the products of human civilization to develop, Herder was still compelled to operate with the less than six thousand years that orthodoxy stingily doled out. To us the two or three thousand years that separate our language from the Old Testament Hebrew seems a negligible quantity, when speculating on the origin of language in general; to Herder, however, the Hebrew and the Greek of Homer seemed to be appreciably nearer the oldest conditions than our vernaculars—hence his exaggeration of their *ursprünglichkeit.*"

Herder's chief influence on the science of speech, to my mind, is not derived directly from the ideas contained in his essay on the actual origin of speech, but rather indirectly through the whole of his life's work. He had a very strong sense of the value of everything that had grown naturally (das naturwüchsige); he prepared the minds of his countrymen for the manysided recep-

[1] See his essay on Herder's "Ursprung der sprache" in *Modern Philology*, 5. 117 (1907).

tiveness of the Romanticists, who translated and admired the popular poetry of a great many countries, which had hitherto been *terræ incognitæ*; and he was one of the first to draw attention to the great national value of his own country's medieval literature and its folklore, and thus was one of the spiritual ancestors of Grimm. He sees the close connexion that exists between language and primitive poetry, or that kind of spontaneous singing that characterizes the childhood or youth of mankind, and which is totally distinct from the artificial poetry of later ages. But to him each language is not only the instrument of literature, but itself literature and poetry. A nation speaks its soul in the words it uses. Herder admires his own mother-tongue, which to him is perhaps inferior to Greek, but superior to its neighbours. The combinations of consonants give it a certain measured pace; it does not rush forward, but walks with the firm carriage of a German. The nice gradation of vowels mitigates the force of the consonants, and the numerous spirants make the German speech pleasant and endearing. Its syllables are rich and firm, its phrases are stately, and its idiomatic expressions are emphatic and serious. Still in some ways the present German language is degenerate if compared with that of Luther, and still more with that of the Suabian Emperors, and much therefore remains to be done in the way of disinterring and revivifying the powerful expressions now lost. Through ideas like these Herder not only exercised a strong influence on Goethe and the Romanticists, but also gave impulses to the linguistic studies of the following generation, and caused many younger men to turn from the well-worn classics to fields of research previously neglected.

I.—§ 4. Jenisch.

Where questions of correct language or of the best usage are dealt with, or where different languages are compared with regard to their efficiency or beauty, as is done very often, though more often in dilettante conversation or in casual remarks in literary works than in scientific linguistic disquisitions, it is no far cry to the question, What would an ideal language be like? But such is the matter-of-factness of modern scientific thought, that probably no scientific Academy in our own days would think of doing what the Berlin Academy did in 1794 when it offered a prize for the best essay on the ideal of a perfect language and a comparison of the best-known languages of Europe as tested by the standard of such an ideal. A Berlin pastor, D. Jenisch, won the prize, and in 1796 brought out his book under the title *Philosophisch-kritische vergleichung und würdigung von vierzehn ältern und neuern sprachen*

Europens—a book which is even now well worth reading, the more so because its subject has been all but completely neglected in the hundred and twenty years that have since intervened. In the Introduction the author has the following passage, which might be taken as the motto of Wilhelm v. Humboldt, Steinthal, Finck and Byrne, who do not, however, seem to have been inspired by Jenisch: "In language the whole intellectual and moral essence of a man is to some extent revealed. 'Speak, and you are' is rightly said by the Oriental. The language of the natural man is savage and rude, that of the cultured man is elegant and polished. As the Greek was subtle in thought and sensuously refined in feeling—as the Roman was serious and practical rather than speculative—as the Frenchman is popular and sociable—as the Briton is profound and the German philosophic—so are also the languages of each of these nations."

Jenisch then goes on to say that language as the organ for communicating our ideas and feelings accomplishes its end if it represents idea and feeling according to the actual want or need of the mind at the given moment. We have to examine in each case the following essential qualities of the languages compared, (1) richness, (2) energy or emphasis, (3) clearness, and (4) euphony. Under the head of richness we are concerned not only with the number of words, first for material objects, then for spiritual and abstract notions, but also with the ease with which new words can be formed (lexikalische bildsamkeit). The energy of a language is shown in its lexicon and in its grammar (simplicity of grammatical structure, absence of articles, etc.), but also in "the characteristic energy of the nation and its original writers." Clearness and definiteness in the same way are shown in vocabulary and grammar, especially in a regular and natural syntax. Euphony, finally, depends not only on the selection of consonants and vowels utilized in the language, but on their harmonious combination, the general impression of the language being more important than any details capable of being analysed.

These, then, are the criteria by which Greek and Latin and a number of living languages are compared and judged. The author displays great learning and a sound practical knowledge of many languages, and his remarks on the advantages and shortcomings of these are on the whole judicious, though often perhaps too much stress is laid on the literary merits of great writers, which have really no intrinsic connexion with the value of a language as such. It depends to a great extent on accidental circumstances whether a language has been or has not been used in elevated literature, and its merits should be estimated, so far as this is possible, independently of the perfection of its literature. Jenisch's prejudice

in that respect is shown, for instance, when he says (p. 36) that the endeavours of Hickes are entirely futile, when he tries to make out regular declensions and conjugations in the barbarous language of Wulfila's translation of the Bible. But otherwise Jenisch is singularly free from prejudices, as shown by a great number of passages in which other languages are praised at the expense of his own. Thus, on p. 396, he declares German to be the most repellent contrast to that most supple modern language, French, on account of its unnatural word-order, its eternally trailing article, its want of participial constructions, and its interminable auxiliaries (as in 'ich werde geliebt werden, ich würde geliebt worden sein,' etc.), with the frequent separation of these auxiliaries from the main verb through extraneous intermediate words, all of which gives to German something incredibly awkward, which to the reader appears as lengthy and diffuse and to the writer as inconvenient and intractable. It is not often that we find an author appraising his own language with such severe impartiality, and I have given the passage also to show what kind of problems confront the man who wishes to compare the relative value of languages as wholes. Jenisch's view here forms a striking contrast to Herder's appreciation of their common mother-tongue.

Jenisch's book does not seem to have been widely read by nineteenth-century scholars, who took up totally different problems. Those few who read it were perhaps inclined to say with S. Lefmann (see his book on Franz Bopp, Nachtrag, 1897, p. xi) that it is difficult to decide which was the greater fool, the one who put this problem or the one who tried to answer it. This attitude, however, towards problems of valuation in the matter of languages is neither just nor wise, though it is perhaps easy to see how students of comparative grammar were by the very nature of their study led to look down upon those who compared languages from the point of view of æsthetic or literary merits. Anyhow, it seems to me no small merit to have been the first to treat such problems as these, which are generally answered in an off-hand way according to a loose general judgement, so as to put them on a scientific footing by examining in detail what it is that makes us more or less instinctively prefer one language, or one turn or expression in a language, and thus lay the foundation of that inductive æsthetic theory of language which has still to be developed in a truly scientific spirit.

CHAPTER II

BEGINNING OF NINETEENTH CENTURY

§ 1. Introduction. Sanskrit. § 2. Friedrich von Schlegel. § 3. Rasmus Rask. § 4. Jacob Grimm. § 5. The Sound Shift. § 6. Franz Bopp. § 7. Bopp continued. § 8. Wilhelm von Humboldt. § 9. Grimm once more.

II.—§ 1. Introduction. Sanskrit.

The nineteenth century witnessed an enormous growth and development of the science of language, which in some respects came to present features totally unknown to previous centuries. The horizon was widened; more and more languages were described, studied and examined, many of them for their own sake, as they had no important literature. Everywhere a deeper insight was gained into the structures even of such languages as had been for centuries objects of study; a more comprehensive and more incisive classification of languages was obtained with a deeper understanding of their mutual relationships, and at the same time linguistic forms were not only described and analysed, but also explained, their genesis being traced as far back as historical evidence allowed, if not sometimes further. Instead of contenting itself with stating when and where a form existed and how it looked and was employed, linguistic science now also began to ask why it had taken that definite shape, and thus passed from a purely descriptive to an explanatory science.

The chief innovation of the beginning of the nineteenth century was the historical point of view. On the whole, it must be said that it was reserved for that century to apply the notion of history to other things than wars and the vicissitudes of dynasties, and thus to discover the idea of development or evolution as pervading the whole universe. This brought about a vast change in the science of language, as in other sciences. Instead of looking at such a language as Latin as one fixed point, and instead of aiming at fixing another language, such as French, in one classical form, the new science viewed both as being in constant flux, as growing, as moving, as continually changing. It cried aloud like Heraclitus

"Pánta reî," and like Galileo "Eppur si muove." And lo! the better this historical point of view was applied, the more secrets languages seemed to unveil, and the more light seemed also to be thrown on objects outside the proper sphere of language, such as ethnology and the early history of mankind at large and of particular countries.

It is often said that it was the discovery of Sanskrit that was the real turning-point in the history of linguistics, and there is some truth in this assertion, though we shall see on the one hand that Sanskrit was not in itself enough to give to those who studied it the true insight into the essence of language and linguistic science, and on the other hand that real genius enabled at least one man to grasp essential truths about the relationships and development of languages even without a knowledge of Sanskrit. Still, it must be said that the first acquaintance with this language gave a mighty impulse to linguistic studies and exerted a lasting influence on the way in which most European languages were viewed by scholars, and it will therefore be necessary here briefly to sketch the history of these studies. India was very little known in Europe till the mighty struggle between the French and the English for the mastery of its wealth excited a wide interest also in its ancient culture. It was but natural that on this intellectual domain, too, the French and the English should at first be rivals and that we should find both nations represented in the pioneers of Sanskrit scholarship. The French Jesuit missionary Cœurdoux as early as 1767 sent to the French Institut a memoir in which he called attention to the similarity of many Sanskrit words with Latin, and even compared the flexion of the present indicative and subjunctive of Sanskrit *asmi*, 'I am,' with the corresponding forms of Latin grammar. Unfortunately, however, his work was not printed till forty years later, when the same discovery had been announced independently by others. The next scholar to be mentioned in this connexion is Sir William Jones, who in 1796 uttered the following memorable words, which have often been quoted in books on the history of linguistics: "The Sanscrit language, whatever be its antiquity, is of a wonderful structure; more perfect than the Greek, more copious than the Latin and more exquisitely refined than either; yet bearing to both of them a stronger affinity, both in the roots of verbs and in the forms of grammar, than could possibly have been produced by accident; so strong, indeed, that no philologer could examine them all three without believing them to have sprung from some common source, which, perhaps, no longer exists. There is a similar reason, though not quite so forcible, for supposing that both the Gothic and the Celtic . . . had the same origin with the Sanscrit; and the old Persian might be added to

the same family." Sir W. Jones, however, did nothing to carry out in detail the comparison thus inaugurated, and it was reserved for younger men to follow up the clue he had given.

II.—§ 2. Friedrich von Schlegel.

One of the books that exercised a great influence on the development of linguistic science in the beginning of the nineteenth century was Friedrich von Schlegel's *Ueber die sprache und weisheit der Indier* (1808). Schlegel had studied Sanskrit for some years in Paris, and in his romantic enthusiasm he hoped that the study of the old Indian books would bring about a revolution in European thought similar to that produced in the Renaissance through the revival of the study of Greek. We are here concerned exclusively with his linguistic theories, but to his mind they were inseparable from Indian religion and philosophy, or rather religious and philosophic poetry. He is struck by the similarity between Sanskrit and the best-known European languages, and gives quite a number of words from Sanskrit found with scarcely any change in German, Greek and Latin. He repudiates the idea that these similarities might be accidental or due to borrowings on the side of the Indians, saying expressly that the proof of original relationship between these languages, as well as of the greater age of Sanskrit, lies in the far-reaching correspondences in the whole grammatical structure of these as opposed to many other languages. In this connexion it is noticeable that he is the first to speak of 'comparative grammar' (p. 28), but, like Moses, he only looks into this promised land without entering it. Indeed, his method of comparison precludes him from being the founder of the new science, for he says himself (p. 6) that he will refrain from stating any rules for change or substitution of letters (sounds), and require complete identity of the words used as proofs of the descent of languages. He adds that in other cases, "where intermediate stages are historically demonstrable, we may derive *giorno* from *dies*, and when Spanish so often has *h* for Latin *f*, or Latin *p* very often becomes *f* in the German form of the same word, and *c* not rarely becomes *h* [by the way, an interesting foreshadowing of one part of the discovery of the Germanic sound-shifting], then this may be the foundation of analogical conclusions with regard to other less evident instances." If he had followed up this idea by establishing similar 'sound-laws,' as we now say, between Sanskrit and other languages, he would have been many years ahead of his time; as it is, his comparisons are those of a dilettante, and he sometimes falls into the pitfalls of accidental similarities while overlooking the real correspondences. He is also led astray by the idea of a

particularly close relationship between Persian and German, an idea which at that time was widely spread[1]—we find it in Jenisch and even in Bopp's first book.

Schlegel is not afraid of surveying the whole world of human languages; he divides them into two classes, one comprising Sanskrit and its congeners, and the second all other languages. In the former he finds organic growth of the roots as shown by their capability of inner change or, as he terms it, 'flexion,' while in the latter class everything is effected by the addition of affixes (prefixes and suffixes). In Greek he admits that it would be possible to believe in the possibility of the grammatical endings (bildungssylben) having arisen from particles and auxiliary words amalgamated into the word itself, but in Sanskrit even the last semblance of this possibility disappears, and it becomes necessary to confess that the structure of the language is formed in a thoroughly organic way through flexion, i.e. inner changes and modifications of the radical sound, and not composed merely mechanically by the addition of words and particles. He admits, however, that affixes in some other languages have brought about something that resembles real flexion. On the whole he finds that the movement of grammatical art and perfection (der gang der bloss grammatischen kunst und ausbildung, p. 56) goes in opposite directions in the two species of languages. In the organic languages, which represent the highest state, the beauty and art of their structure is apt to be lost through indolence; and German as well as Romanic and modern Indian languages show this degeneracy when compared with the earlier forms of the same languages. In the affix languages, on the other hand, we see that the beginnings are completely artless, but the 'art' in them grows more and more perfect the more the affixes are fused with the main word.

As to the question of the ultimate origin of language, Schlegel thinks that the diversity of linguistic structure points to different beginnings. While some languages, such as Manchu, are so interwoven with onomatopœia that imitation of natural sounds must have played the greatest rôle in their formation, this is by no means the case in other languages, and the perfection of the oldest organic or flexional languages, such as Sanskrit, shows that they cannot be derived from merely animal sounds; indeed, they form an additional proof, if any such were needed, that men did not everywhere start from a brutish state, but that the clearest and intensest reason existed from the very first beginning. On all these points Schlegel's ideas foreshadow views that are found in later works; and it is probable that his fame as a writer outside the philological field gave to his linguistic speculations a notoriety which his often

[1] It dates back to Vulcanius, 1597; see Streitberg, IF 35. 182.

loose and superficial reasonings would not otherwise have acquired for them.

Schlegel's bipartition of the languages of the world carries in it the germ of a tripartition. On the lowest stage of his second class he places Chinese, in which, as he acknowledges, the particles denoting secondary sense modifications consist in monosyllables that are completely independent of the actual word. It is clear that from Schlegel's own point of view we cannot here properly speak of 'affixes,' and thus Chinese really, though Schlegel himself does not say so, falls outside his affix languages and forms a class by itself. On the other hand, his arguments for reckoning Semitic languages among affix languages are very weak, and he seems also somewhat inclined to say that much in their structure resembles real flexion. If we introduce these two changes into his system, we arrive at the threefold division found in slightly different shapes in most subsequent works on general linguistics, the first to give it being perhaps Schlegel's brother, A. W. Schlegel, who speaks of (1) les langues sans aucune structure grammaticale—under which misleading term he understands Chinese with its unchangeable monosyllabic words; (2) les langues qui emploient des affixes; (3) les langues à inflexions.

Like his brother, A. W. Schlegel places the flexional languages highest and thinks them alone 'organic.' On the other hand, he subdivides flexional languages into two classes, synthetic and analytic, the latter using personal pronouns and auxiliaries in the conjugation of verbs, prepositions to supply the want of cases, and adverbs to express the degrees of comparison. While the origin of the synthetic languages loses itself in the darkness of ages, the analytic languages have been created in modern times; all those that we know are due to the decomposition of synthetic languages. These remarks on the division of languages are found in the Introduction to the book *Observations sur la langue et la littérature provençale* (1818) and are thus primarily meant to account for the contrast between synthetic Latin and analytic Romanic.

II.—§ 3. Rasmus Rask.

We now come to the three greatest names among the initiators of linguistic science in the beginning of the nineteenth century. If we give them in their alphabetical order, Bopp, Grimm and Rask, we also give them in the order of merit in which most subsequent historians have placed them. The works that constitute their first claims to the title of founder of the new science came in close succession, Bopp's *Conjugationssystem* in 1816, Rask's *Undersøgelse* in 1818, and the first volume of Grimm's *Grammatik* in

1819. While Bopp is entirely independent of the two others, we shall see that Grimm was deeply influenced by Rask, and as the latter's contributions to our science began some years before his chief work just mentioned (which had also been finished in manuscript in 1814, thus two years before Bopp's *Conjugationssystem*), the best order in which to deal with the three men will perhaps be to take Rask first, then to mention Grimm, who in some ways was his pupil, and finally to treat of Bopp: in this way we shall also be enabled to see Bopp in close relation with the subsequent development of Comparative Grammar, on which he, and not Rask, exerted the strongest influence.

Born in a peasant's hut in the heart of Denmark in 1787, Rasmus Rask was a grammarian from his boyhood. When a copy of the *Heimskringla* was given him as a school prize, he at once, without any grammar or dictionary, set about establishing paradigms, and so, before he left school, acquired proficiency in Icelandic, as well as in many other languages. At the University of Copenhagen he continued in the same course, constantly widened his linguistic horizon and penetrated into the grammatical structure of the most diverse languages. Icelandic (Old Norse), however, remained his favourite study, and it filled him with enthusiasm and national pride that "our ancestors had such an excellent language," the excellency being measured chiefly by the full flexional system which Icelandic shared with the classical tongues, partly also by the pure, unmixed state of the Icelandic vocabulary. His first book (1811) was an Icelandic grammar, an admirable production when we consider the meagre work done previously in this field. With great lucidity he reduces the intricate forms of the language into a consistent system, and his penetrating insight into the essence of language is seen when he explains the vowel changes, which we now comprise under the name of mutation or umlaut, as due to the approximation of the vowel of the stem to that of the ending, at that time a totally new point of view. This we gather from Grimm's review, in which Rask's explanation is said to be "more astute than true" ("mehr scharfsinnig als wahr," *Kleinere schriften*, 7. 518). Rask even sees the reason of the change in the plural *blǫð* as against the singular *blað* in the former having once ended in *-u*, which has since disappeared. This is, so far as I know, the first inference ever drawn to a prehistoric state of language.

In 1814, during a prolonged stay in Iceland, Rask sent down to Copenhagen his most important work, the prize essay on the origin of the Old Norse language (*Undersøgelse om det gamle nordiske eller islandske sprogs oprindelse*) which for various reasons was not printed till 1818. If it had been published when it was finished, and especially if it had been printed in a language

better known than Danish, Rask might well have been styled the founder of the modern science of language, for his work contains the best exposition of the true method of linguistic research written in the first half of the nineteenth century and applies this method to the solution of a long series of important questions. Only one part of it was ever translated into another language, and this was unfortunately buried in an appendix to Vater's *Vergleichungstafeln*, 1822. Yet Rask's work even now repays careful perusal, and I shall therefore give a brief résumé of its principal contents.

Language according to Rask is our principal means of finding out anything about the history of nations before the existence of written documents, for though everything may change in religion, customs, laws and institutions, language generally remains, if not unchanged, yet recognizable even after thousands of years. But in order to find out anything about the relationship of a language we must proceed methodically and examine its whole structure instead of comparing mere details; what is here of prime importance is the grammatical system, because words are very often taken over from one language to another, but very rarely grammatical forms. The capital error in most of what has been written on this subject is that this important point has been overlooked. That language which has the most complicated grammar is nearest to the source; however mixed a language may be, it belongs to the same family as another if it has the most essential, most material and indispensable words in common with it; pronouns and numerals are in this respect most decisive. If in such words there are so many points of agreement between two languages that it is possible to frame rules for the transitions of letters (in other passages Rask more correctly says sounds) from the one language to the other, there is a fundamental kinship between the two languages, more particularly if there are corresponding similarities in their structure and constitution. This is a most important thesis, and Rask supplements it by saying that transitions of sounds are naturally dependent on their organ and manner of production.

Next Rask proceeds to apply these principles to his task of finding out the origin of the Old Icelandic language. He describes its position in the 'Gothic' (Gothonic, Germanic) group and then looks round to find congeners elsewhere. He rapidly discards Greenlandic and Basque as being too remote in grammar and vocabulary; with regard to Keltic languages he hesitates, but finally decides in favour of denying relationship. (He was soon to see his error in this; see below.) Next he deals at some length with Finnic and Lapp, and comes to the conclusion that the simi-

larities are due to loans rather than to original kinship. But when he comes to the Slavonic languages his utterances have a different ring, for he is here able to disclose so many similarities in fundamentals that he ranges these languages within the same great family as Icelandic. The same is true with regard to Lithuanian and Lettic, which are here for the first time correctly placed as an independent sub-family, though closely akin to Slavonic. The comparisons with Latin, and especially with Greek, are even more detailed; and Rask in these chapters really presents us with a succinct, but on the whole marvellously correct, comparative grammar of Gothonic, Slavonic, Lithuanian, Latin and Greek, besides examining numerous lexical correspondences. He does not yet know any of the related Asiatic languages, but throws out the hint that Persian and Indian may be the remote source of Icelandic through Greek. Greek he considers to be the 'source' or 'root' of the Gothonic languages, though he expresses himself with a degree of uncertainty which forestalls the correct notion that these languages have all of them sprung from the same extinct and unknown language. This view is very clearly expressed in a letter he wrote from St. Petersburg in the same year in which his *Undersøgelse* was published; he here says: "I divide our family of languages in this way: the Indian (Dekanic, Hindostanic), Iranic (Persian, Armenian, Ossetic), Thracian (Greek and Latin), Sarmatian (Lettic and Slavonic), Gothic (Germanic and Skandinavian) and Keltic (Britannic and Gaelic) tribes" (SA 2. 281, dated June 11, 1818).

This is the fullest and clearest account of the relationships of our family of languages found for many years, and Rask showed true genius in the way in which he saw what languages belonged together and how they were related. About the same time he gave a classification of the Finno-Ugrian family of languages which is pronounced by such living authorities on these languages as Vilhelm Thomsen and Emil Setälä to be superior to most later attempts. When travelling in India he recognized the true position of Zend, about which previous scholars had held the most erroneous views, and his survey of the languages of India and Persia was thought valuable enough in 1863 to be printed from his manuscript, forty years after it was written. He was also the first to see that the Dravidian (by him called Malabaric) languages were totally different from Sanskrit. In his short essay on Zend (1826) he also incidentally gave the correct value of two letters in the first cuneiform writing, and thus made an important contribution towards the final deciphering of these inscriptions.

His long tour (1816–23) through Sweden, Finland, Russia, the Caucasus, Persia and India was spent in the most intense study

of a great variety of languages, but unfortunately brought on the illness and disappointments which, together with economic anxieties, marred the rest of his short life.

When Rask died in 1832 he had written a great number of grammars of single languages, all of them remarkable for their accuracy in details and clear systematic treatment, more particularly of morphology, and some of them breaking new ground; besides his Icelandic grammar already mentioned, his Anglo-Saxon, Frisian and Lapp grammars should be specially named. Historical grammar in the strict sense is perhaps not his forte, though in a remarkable essay of the year 1815 he explains historically a great many features of Danish grammar, and in his Spanish and Italian grammars he in some respects forestalls Diez's historical explanations. But in some points he stuck to erroneous views, a notable instance being his system of old Gothonic 'long vowels,' which was reared on the assumption that modern Icelandic pronunciation reflects the pronunciation of primitive times, while it is really a recent development, as Grimm saw from a comparison of all the old languages. With regard to consonants, however, Rask was the clearer-sighted of the two, and throughout he had this immense advantage over most of the comparative linguists of his age, that he had studied a great many languages at first hand with native speakers, while the others knew languages chiefly or exclusively through the medium of books and manuscripts. In no work of that period, or even of a much later time, are found so many first-hand observations of living speech as in Rask's *Retskrivningslære.* Handicapped though he was in many ways, by poverty and illness and by the fact that he wrote in a language so little known as Danish, Rasmus Rask, through his wide outlook, his critical sagacity and aversion to all fanciful theorizing, stands out as one of the foremost leaders of linguistic science.[1]

II.—§ 4. Jacob Grimm.

Jacob Grimm's career was totally different from Rask's. Born in 1785 as the son of a lawyer, he himself studied law and came under the influence of Savigny, whose view of legal institutions as the outcome of gradual development in intimate connexion with popular tradition and the whole intellectual and moral life of the

[1] I have given a life of Rask and an appraisement of his work in the small volume *Rasmus Rask* (Copenhagen, Gyldendal, 1918). See also Vilh. Thomsen, *Samlede afhandlinger*, 1. 47 ff. and 125 ff. A good and full account of Rask's work is found in Raumer, *Gesch.*; cf. also Paul, *Gr.* Recent short appreciations of his genius may be read in Trombetti, *Come si fa la critica*, 1907, p. 41, Meillet, LI, p. 415, Hirt, Idg, pp. 74 and 578.

people appealed strongly to the young man's imagination. But he was drawn even more to that study of old German popular poetry which then began to be the fashion, thanks to Tieck and other Romanticists; and when he was in Paris to assist Savigny with his historico-legal research, the old German manuscripts in the Bibliothèque nationale nourished his enthusiasm for the poetical treasures of the Middle Ages. He became a librarian and brought out his first book, *Ueber den altdeutschen meistergesang* (1811). At the same time, with his brother Wilhelm as constant companion and fellow-worker, he began collecting popular traditions, of which he published a first instalment in his famous *Kinder- und hausmärchen* (1812 ff.), a work whose learned notes and comparisons may be said to have laid the foundation of the science of folklore. Language at first had only a subordinate interest to him, and when he tried his hand at etymology, he indulged in the wildest guesses, according to the method (or want of method) of previous centuries. A. W. Schlegel's criticism of his early attempts in this field, and still more Rask's example, opened Grimm's eyes to the necessity of a stricter method, and he soon threw himself with great energy into a painstaking and exact study of the oldest stages of the German language and its congeners. In his review (1812) of Rask's Icelandic grammar he writes: "Each individuality, even in the world of languages, should be respected as sacred; it is desirable that even the smallest and most despised dialect should be left only to itself and to its own nature and in nowise subjected to violence, because it is sure to have some secret advantages over the greatest and most highly valued language." Here we meet with that valuation of the hitherto overlooked popular dialects which sprang from the Romanticists' interest in the 'people' and everything it had produced. Much valuable linguistic work was directly inspired by this feeling and by conscious opposition to the old philology, that occupied itself exclusively with the two classical languages and the upper-class literature embodied in them. As Scherer expresses it (*Jacob Grimm*, 2te ausg., Berlin, 1885, p. 152): "The brothers Grimm applied to the old national literature and to popular traditions the old philological virtue of exactitude, which had up to then been bestowed solely on Greek and Roman classics and on the Bible. They extended the field of strict philology, as they extended the field of recognized poetry. They discarded the aristocratic narrow-mindedness with which philologists looked down on unwritten tradition, on popular ballads, legends, fairy tales, superstition, nursery rimes. . . . In the hands of the two Grimms philology became national and popular; and at the same time a pattern was created for the scientific study of all the peoples of the earth and

for a comparative investigation of the entire mental life of mankind, of which written literature is nothing but a small epitome."

But though Grimm thus broke loose from the traditions of classical philology, he still carried with him one relic of it, namely the standard by which the merits of different languages were measured. "In reading carefully the old Gothonic (altdeutschen) sources, I was every day discovering forms and perfections which we generally envy the Greeks and Romans when we consider the present condition of our language.". . . "Six hundred years ago every rustic knew, that is to say practised daily, perfections and niceties in the German language of which the best grammarians nowadays do not even dream; in the poetry of Wolfram von Eschenbach and of Hartmann von Aue, who had never heard of declension and conjugation, nay who perhaps did not even know how to read and write, many differences in the flexion and use of nouns and verbs are still nicely and unerringly observed, which we have gradually to rediscover in learned guise, but dare not reintroduce, for language ever follows its inalterable course."

Grimm then sets about writing his great historical and com parative *Deutsche Grammatik*, taking the term 'deutsch' in its widest and hardly justifiable sense of what is now ordinarily called Germanic and which is in this work called Gothonic. The first volume appeared in 1819, and in the preface we see that he was quite clear that he was breaking new ground and introducing a new method of looking at grammar. He speaks of previous German grammars and says expressly that he does not want his to be ranged with them. He charges them with unspeakable pedantry; they wanted to dogmatize magisterially, while to Grimm language, like everything natural and moral, is an unconscious and unnoticed secret which is implanted in us in youth. Every German therefore who speaks his language naturally, i.e. untaught, may call himself his own living grammar and leave all schoolmasters' rules alone. Grimm accordingly has no wish to prescribe anything, but to observe what has grown naturally, and very appropriately he dedicates his work to Savigny, who has taught him how institutions grow in the life of a nation In the new preface to the second edition there are also some noteworthy indications of the changed attitude. "I am hostile to general logical notions in grammar; they conduce apparently to strictness and solidity of definition, but hamper observation, which I take to be the soul of linguistic science. . . . As my starting-point was to trace the never-resting (unstillstehende) element of our language which changes with time and place, it became necessary for me to admit one dialect after the other, and I could not even

forbear to glance at those foreign languages that are ultimately related with ours."

Here we have the first clear programme of that historical school which has since then been the dominating one in linguistics. But as language according to this new point of view was constantly changing and developing, so also, during these years, were Grimm's own ideas. And the man who then exercised the greatest influence on him was Rasmus Rask. When Grimm wrote the first edition of his *Grammatik* (1819), he knew nothing of Rask but the Icelandic grammar, but just before finishing his own volume Rask's prize essay reached him, and in the preface he at once speaks of it in the highest terms of praise, as he does also in several letters of this period; he is equally enthusiastic about Rask's Anglo-Saxon grammar and the Swedish edition of his Icelandic grammar, neither of which reached him till after his own first volume had been printed off. The consequence was that instead of going on to the second volume, Grimm entirely recast the first volume and brought it out in a new shape in 1822. The chief innovation was the phonology or, as he calls it, "Erstes buch. Von den buchstaben," which was entirely absent in 1819, but now ran to 595 pages.

II.—§ 5. The Sound Shift.

This first book in the 1822 volume contains much, perhaps most, of what constitutes Grimm's fame as a grammarian, notably his exposition of the 'sound shift' (lautverschiebung), which it has been customary in England since Max Müller to term 'Grimm's Law.' If any one man is to give his name to this law, a better name would be 'Rask's Law,' for all these transitions, Lat. Gr. *p* = *f*, *t* = þ (*th*), *k* = *h*, etc., are enumerated in Rask's *Undersøgelse*, p. 168, which Grimm knew before he wrote a single word about the sound shift.

Now, it is interesting to compare the two scholars' treatment of these transitions. The sober-minded, matter-of-fact Rask contents himself with a bare statement of the facts, with just enough well-chosen examples to establish the correspondence; the way in which he arranges the sounds shows that he saw their parallelism clearly enough, though he did not attempt to bring everything under one single formula, any more than he tried to explain why these sounds had changed.[1] Grimm multiplies the examples and

[1] Only in one subordinate point did Rask make a mistake (*b* = *b*), which is all the more venial as there are extremely few examples of this sound. Bredsdorff (*Aarsagerne*, 1821, p. 21) evidently had the law from Rask, and gives it in the comprehensive formula which Paul (Gr. 1. 86) misses in Rask and gives as Grimm's meritorious improvement on Rask. "The Germanic

then systematizes the whole process in one formula so as to comprise also the 'second shift' found in High German alone—a shift well known to Rask, though treated by him in a different place (p. 68 f.). Grimm's formula looks thus:

Greek	p	b	f	t	d	th	k	g	ch
Gothic	f	p	b	th	t	d	h	k	g
High G.	b(v)f		p	d	z	t	g	ch	k,

which may be expressed generally thus, that tenuis (T) becomes aspirate (A) and then media (M), etc., or, tabulated:

Greek	T	M	A
Gothic	A	T	M
High G.	M	A	T.

For this Grimm would of course have deserved great credit, because a comprehensive formula is more scientific than a rough statement of facts—*if* the formula had been correct; but unfortunately it is not so. In the first place, it breaks down in the very first instance, for there is no media in High German corresponding to Gr. *p* and Gothic *f* (cf. *poûs, fotus, fuss*, etc.); secondly, High German has *h* just as Gothic has, corresponding to Greek *k* (cf. *kardía, hairto, herz*, etc.), and where it has *g*, Gothic has also *g* in accordance with rules unknown to Grimm and not explained till long afterwards (by Verner). But the worst thing is that the whole specious generalization produces the impression of regularity and uniformity only through the highly unscientific use of the word 'aspirate,' which is made to cover such phonetically disparate things as (1) combination of stop with following *h*, (2) combination of stop with following fricative, *pf, ts* written *z*, (3) voiceless fricative, *f, s* in G. *das*, (4) voiced fricative, *v*, ð written *th*, and (5) *h*. Grimm rejoiced in his formula, giving as it does three chronological stages in each of the three subdivisions (tenuis, media, aspirate) of each of the three classes of consonants (labial, dental, 'guttural'). This evidently took hold of his fancy through the mystic power of the number three, which he elsewhere (Gesch 1. 191, cf. 241) finds pervading language generally: three original vowels, *a, i, u*, three genders, three numbers (singular, dual, plural), three persons, three 'voices' (genera: active, middle, passive), three tenses (present, preterit, future), three declensions through *a, i, u*. As there is here an element of mysticism, so is there also in Grimm's highflown

family has most often aspirates where Greek has tenues, tenues where it has mediæ, and again mediæ where it has aspirates, e.g. *fod*, Gr. *pous*; *horn*, Gr. *keras*; *þrir*, Gr. *treis*; *padde*, Gr. *batrakhos*; *kone*, Gr. *gunē*; *ti*, Gr. *deka*; *bærer*, Gr. *pherō*; *galde*, Gr. *kholē*; *dør*, Gr. *thura*." To the word 'horn' was appended a foot-note to the effect that *h* without doubt here originally was the German *ch*-sound. This was one year before Grimm stated his law!

explanation of the whole process from pretended popular psychology, which is full of the cloudiest romanticism. "When once the language had made the first step and had rid itself of the organic basis of its sounds, it was hardly possible for it to escape the second step and not to arrive at the third stage,[1] through which this development was perfected. . . . It is impossible not to admire the instinct by which the linguistic spirit (sprachgeist) carried this out to the end. A great many sounds got out of joint, but they always knew how to arrange themselves in a different place and to find the new application of the old law. I am not saying that the shift happened without any detriment, nay from one point of view the sound shift appears to me as a barbarous aberration, from which other more quiet nations abstained, but which is connected with the violent progress and craving for freedom which was found in Germany in the beginning of the Middle Ages and which initiated the transformation of Europe. The Germans pressed forward even in the matter of the innermost sounds of their language," etc., with remarks on intellectual progress and on victorious and ruling races. Grimm further says that "die dritte stufe des verschobnen lauts den kreislauf abschliesse und nach ihr ein neuer ansatz zur abweichung wieder von vorn anheben müsse. Doch eben weil der sprachgeist seinen lauf vollbracht hat, scheint er nicht wieder neu beginnen zu wollen" (GDS 1. 292 f., 299). It would be difficult to attach any clear ideas to these words.

Grimm's idea of a 'kreislauf' is caused by the notion that the two shifts, separated by several centuries, represent one continued movement, while the High German shift of the eighth century has really no more to do with the primitive Gothonic shift, which took place probably some time before Christ, than has, for instance, the Danish shift in words like *gribe, bide, bage,* from *gripæ, bitæ, bakæ* (about 1400), or the still more recent transition in Danish through which stressed *t* in *tid, tyve,* etc., sounds nearly like [ts], as in HG. *zeit.* There cannot possibly be any causal nexus between such transitions, separated chronologically by long periods, with just as little change in the pronunciation of these consonants as there has been in English.[2]

1 The muddling of the negatives is Grimm's, not the translator's.

2 I am therefore surprised to find that in a recent article (*Am. Journ. of Philol.* 39. 415, 1918) Collitz praises Grimm's view in preference to Rask's because he saw "an inherent connexion between the various processes of the shifting," which were "subdivisions of one great law in which the formula T : A : M may be used to illustrate the shifting (in a single language) of three different groups of consonants and the result of a double or threefold shifting (in three different languages) of a single group of consonants. This great law was unknown to Rask." Collitz recognizes that "Grimm's law will hold good only if we accept the term 'aspirate' in the broad sense in which

Grimm was anything but a phonetician, and sometimes says things which nowadays cannot but produce a smile, as when he says (Gr 1. 3) "in our word *schrift*, for instance, we express eight sounds through seven signs, for *f* stands for *ph*"; thus he earnestly believes that *sch* contains three sounds, *s* and the 'aspirate' *ch*=*c*+*h*! Yet through the irony of fate it was on the history of sounds that Grimm exercised the strongest influence. As in other parts of his grammar, so also in the "theory of letters" he gave fuller word lists than people had been accustomed to, and this opened the eyes of scholars to the great regularity reigning in this department of linguistic development. Though in his own etymological practice he was far from the strict idea of 'phonetic law' that played such a prominent rôle in later times, he thus paved the way for it. He speaks of law at any rate in connexion with the consonant shift, and there recognizes that it serves to curb wild etymologies and becomes a test for them (Gesch 291). The consonant shift thus became *the* law in linguistics, and because it affected a great many words known to everybody, and in a new and surprising way associated well-known Latin or Greek words with words of one's own mother-tongue, it became popularly the keystone of a new wonderful science.

Grimm coined several of the terms now generally used in linguistics; thus *umlaut* and *ablaut*, 'strong' and 'weak' declensions and conjugations. As to the first, we have seen that it was Rask who first understood and who taught Grimm the cause of this phenomenon, which in English has often been designated by the German term, while Sweet calls it 'mutation' and others better 'infection.' With regard to 'ablaut' (Sweet: gradation, best perhaps in English apophony), Rask termed it 'omlyd,' a word which he never applied to Grimm's 'umlaut,' thus keeping the two kinds of vowel change as strictly apart as Grimm does. Apophony was first discovered in that class of verbs which Grimm called 'strong'; he was fascinated by the commutation of the vowels in *springe, sprang, gesprungen,* and sees in it, as in *bimbambum*, something mystic and admirable, characteristic of the old German spirit. He was thus blind to the correspondences found in other languages, and his theory led him astray in the second volume, in which he constructed imaginary verbal roots to explain apophony wherever it was found outside the verbs.

it is employed by J. Grimm"—but 'broad' here means 'wrong' or 'unscientific.' There is no *kreislauf* in the case of initial *k* = *h*; only in a few of the nine series do we find three distinct stages (as in *tres, three, drei*); here we have in Danish three stages, of which the third is a reversal to the first (*tre*); in E. *mother* we have five stages: *t*, þ, ð, *d*, (OE. *modor*) and again ð. Is there an "inherent connexion between the various processes of this shifting" too?

Though Grimm, as we have seen, was by his principles and whole tendency averse to prescribing laws for a language, he is sometimes carried away by his love for mediæval German, as when he gives as the correct nominative form *der boge*, though everybody for centuries had said *der bogen*. In the same way many of his followers would apply the historical method to questions of correctness of speech, and would discard the forms evolved in later times in favour of previously existing forms which were looked upon as more 'organic.'

It will not be necessary here to speak of the imposing work done by Grimm in the rest of his long life, chiefly spent as a professor in Berlin. But in contrast to the ordinary view I must say that what appears to me as most likely to endure is his work on syntax, contained in the fourth volume of his grammar and in monographs. Here his enormous learning, his close power of observation, and his historical method stand him in good stead, and there is much good sense and freedom from that kind of metaphysical systematism which was triumphant in contemporaneous work on classical syntax. His services in this field are the more interesting because he did not himself seem to set much store by these studies and even said that syntax was half outside the scope of grammar. This utterance belongs to a later period than that of the birth of historical and comparative linguistics, and we shall have to revert to it after sketching the work of the third great founder of this science, to whom we shall now turn.

II.—§ 6. Franz Bopp.

The third, by some accounted the greatest, among the founders of modern linguistic science was Franz Bopp. His life was uneventful. At the age of twenty-one (he was born in 1791) he went to Paris to study Oriental languages, and soon concentrated his attention on Sanskrit. His first book, from which it is customary in Germany to date the birth of Comparative Philology, appeared in 1816, while he was still in Paris, under the title *Ueber des conjugationssystem der sanskritsprache in vergleichung mit jenem der griechischen, lateinischen, persischen und germanischen sprache*, but the latter part of the small volume was taken up with translations from Sanskrit, and for a long time he was just as much a Sanskrit scholar, editing and translating Sanskrit texts, as a comparative grammarian. He showed himself in the latter character in several papers read before the Berlin Academy, after he had been made a professor there in 1822, and especially in his famous *Vergleichende grammatik des sanskrit, send, armenischen, griechischen, lateinischen, litauischen, altslâwischen, gotischen und deutschen*, the first edition of which was

published between 1833 and 1849, the second in 1857, and the third in 1868. Bopp died in 1867.

Of Bopp's *Conjugationssystem* a revised, rearranged and greatly improved English translation came out in 1820 under the title *Analytical Comparison of the Sanskrit, Greek, Latin and Teutonic Languages.* This was reprinted with a good introduction by F. Techmer in his *Internationale zeitschrift für allgem. sprachwissenschaft IV* (1888), and in the following remarks I shall quote this (abbreviated AC) instead of, or alongside of, the German original (abbreviated C).

Bopp's chief aim (and in this he was characteristically different from Rask) was to find out the ultimate origin of grammatical forms. He follows his quest by the aid of Sanskrit forms, though he does not consider these as the ultimate forms themselves: "I do not believe that the Greek, Latin, and other European languages are to be considered as derived from the Sanskrit in the state in which we find it in Indian books; I feel rather inclined to consider them altogether as subsequent variations of one original tongue, which, however, the Sanskrit has preserved more perfect than its kindred dialects. But whilst therefore the language of the Brahmans more frequently enables us to conjecture the primitive form of the Greek and Latin languages than what we discover in the oldest authors and monuments, the latter on their side also may not unfrequently elucidate the Sanskrit grammar" (AC 3). Herein subsequent research has certainly borne out Bopp's view.

After finding out by a comparison of the grammatical forms of Sanskrit, Greek, etc., which of these forms were identical and what were their oldest shapes, he tries to investigate the ultimate origin of these forms. This he takes to be a comparatively easy consequence of the first task, but he was here too much under the influence of the philosophical grammar then in vogue. Gottfried Hermann (*De emendanda ratione Græcæ grammaticæ*, 1801), on purely logical grounds, distinguishes three things as necessary elements of each sentence, the subject, the predicate, and the copula joining the first two elements together; as the power of the verb is to attribute the predicate to the subject, there is really only one verb, namely the verb *to be*. Bopp's teacher in Paris, Silvestre de Sacy, says the same thing, and Bopp repeats: "A verb, in the most restricted meaning of the term, is that part of speech by which a subject is connected with its attribute. According to this definition it would appear that there can exist only one verb, namely, the substantive verb, in Latin *esse*; in English, *to be*. . . . Languages of a structure similar to that of the Greek, Latin etc., can express by one verb of this kind a whole logical proposition, in which, however, that part of speech which expresses the connexion

of the subject with its attribute, which is the characteristic function of the verb, is generally entirely omitted or understood. The Latin verb *dat* expresses the proposition 'he gives,' or 'he is giving': the letter *t*, indicating the third person, is the subject, *da* expresses the attribute of giving, and the grammatical *copula* is understood. In the verb *potest*, the latter is expressed, and *potest* unites in itself the three essential parts of speech, *t* being the subject, *es* the copula, and *pot* the attribute."

Starting from this logical conception of grammar, Bopp is inclined to find everywhere the 'substantive verb' *to bė* in its two Sanskrit forms *as* and *bhu* as an integral part of verbal forms. He is not the first to think that terminations, which are now inseparable parts of a verb, were originally independent words; thus Horne Tooke (in *Epea pteroenta*, 1786, ii. 429) expressly says that "All those common terminations in any language . . . are themselves separate words with distinct meanings," and explains, for instance, Latin *ibo* from *i*, '*go*' + *b*, 'will,' from Greek *boúl-(omai)* + *o* '*I*,' from *ego*. Bopp's explanations are similar to this, though they do not imply such violent shortenings as that of *boúl-(omai)* to *b*. He finds the root Sanskrit *as*, 'to be,' in Latin perfects like *scrip-s-i*, in Greek aorists like *e-tup-s-a* and in futures like *tup-s-o*. That the same addition thus indicates different tenses does not trouble Bopp greatly; he explains Lat. *fueram* from *fu* + *es* + *am*, etc., and says that the root *fu* "contains, properly, nothing to indicate past time, but the usage of language having supplied the want of an adequate inflexion, *fui* received the sense of a perfect, and *fu-eram*, which would be nothing more than an imperfect, that of a pluperfect, and after the same manner *fu-ero* signifies 'I shall have been,' instead of 'I shall be'" (AC 57). All Latin verbal endings containing *r* are thus explained as being ultimately formed with the substantive verb (*ama-rem*, etc.); thus among others the infinitives *fac-ere*, *ed-ere*, as well as *esse*, *posse*: "*E* is properly, in Latin, the termination of a simple infinitive active; and the root *Es* produced anciently *ese*, by adding *e*; the *s* having afterwards been doubled, we have *esse*. This termination *e* answers to the Greek infinitive in *ai*, *eînai* . . ." (AC 58).

If Bopp found a master-key to many of the verbal endings in the Sanskrit root *es*, he found a key to many others in the other root of the verb 'to be,' Sanskrit *bhu*. He finds it in the Latin imperfect *da-bam*, as well as in the future *da-bo*, the relation between which is the same as that between *er-am* and *er-o*. "*Bo, bis, bit* has a striking similarity with the Anglo-Saxon *beo, bys, byth*, the future tense of the verb substantive, a similarity which cannot be considered as merely accidental." [Here neither the form nor the function of the Anglo-Saxon is stated quite correctly.] But

the ending in Latin *ama-vi* is also referred to the same root; for the change of the *b* into *v* we are referred to Italian *amava*, from Lat. *amabam*; thus also *fui* is for *fuvi* and *potui* is for *pot-vi*: "languages manifest a constant effort to combine heterogeneous materials in such a manner as to offer to the ear or eye one perfect whole, like a statue executed by a skilful artist, that wears the appearance of a figure hewn out of one piece of marble" (AC 60).

The following may be taken as a fair specimen of the method followed in these first attempts to account for the origin of flexional forms: "The Latin passive forms *amat-ur*, *amant-ur*, would, in some measure, conform to this mode of joining the verb substantive, if the *r* was also the result of a permutation of an original *s*; and this appears not quite incredible, if we compare the second person *ama-ris* with the third *amat-ur*. Either in one or the other there must be a transposition of letters, to which the Latin language is particularly addicted. If *ama-ris*, which might have been produced from *ama-sis*, has preserved the original order of letters, then *ama-tur* must be the transposition of *ama-rut* or *ama-sut*, and *ama-ntur* that of *ama-runt* or *ama-sunt*. If this be the case, the origin of the Latin passive can be accounted for, and although differing from that of the Sanskrit, Greek, and Gothic languages, it is not produced by the invention of a new grammatical form. It becomes clear, also, why many verbs, with a passive form, have an active signification; because there is no reason why the addition of the verb substantive should necessarily produce a passive sense. There is another way of explaining *ama-ris*, if it really stands for *ama-sis*; the *s* may be the radical consonant of the reflex pronoun *se*. The introduction of this pronoun would be particularly adapted to form the middle voice, which expresses the reflexion of the action upon the actor; but the Greek language exemplifies the facility with which the peculiar signification of the middle voice passes into that of the passive." The reasoning in the beginning of this passage (the only one contained in C) carries us back to a pre-scientific atmosphere, of which there are few or no traces in Rask's writings; the latter explanation (added in AC) was preferred by Bopp himself in later works, and was for many years accepted as the correct one, until scholars found a passive in *r* in Keltic, where the transition from *s* to *r* is not found as it is in Latin; and as the closely corresponding forms in Keltic and Italic must obviously be explained in the same way, the hypothesis of a composition with *se* was generally abandoned. Bopp's partiality for the abstract verb is seen clearly when he explains the Icelandic passive in *-st* from *s* = *es* (C 132); here Rask and Grimm saw the correct and obvious explanation.

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Among the other explanations given first by Bopp must be mentioned the Latin second person of the passive voice *-mini*, as in *ama-mini*, which he takes to be the nominative masculine plural of a participle corresponding to Greek *-menos* and found in a different form in Lat. *alumnus* (AC 51). This explanation is still widely accepted, though not by everybody.

With regard to the preterit of what Grimm was later to term the 'weak' verbs, Bopp vacillates between different explanations. In C 118 he thinks the *t* or *d* is identical with the ending of the participle, in which the case endings were omitted and supplanted by personal endings; the syllable *ed* after *d* [in Gothic *sok-id-edum*; 'Greek,' p. 119, must be a misprint for Gothic] is nothing but an accidental addition. But on p. 151 he sees in *sokidedun*, *sokidedi*, a connexion of *sok* with the preterit of the verb *Tun*, as if the Germans were to say *suchetaten*, *suchetäte*; he compares the English use of *did* (*did seek*), and thinks the verb used is G. *tun*, Goth. *taujan*. The theory of composition is here restricted to those forms that contain two *d's*, i.e. the plural indicative and the subjunctive. In the English edition this twofold explanation is repeated with some additions: *d* or *t* as in Gothic *sok-i-da* and *oh-ta* originates from a participle found in Sanskr. *tyak-ta*, *likh-i-ta*, Lat. *-tus*, Gr. *-tós*; this suffix generally has a passive sense, but in neuter verbs an active sense, and therefore would naturally serve to form a preterit tense with an active signification. He finds a proof of the connexion between this preterit and the participle in the fact that only such verbs as have this ending in the participle form their preterit by means of a dental, while the others (the 'strong' verbs, as Grimm afterwards termed them) have a participle in *an* and reduplication or a change of vowel in the preterit; and Bopp compares the Greek aorist passive *etúphth-ēn*, *edóth-ēn*, which he conceives may proceed from the participle *tuphth-eis*, *doth-eis* (AC 37 ff.). This suggestion seems to have been commonly overlooked or abandoned, while the other explanation, from *dedi* as in English *did seek*, which Bopp gives p. 49 for the subjunctive and the indicative plural, was accepted by Grimm as the explanation of all the forms, even of those containing only one dental; in later works Bopp agreed with Grimm and thus gave up the first part of his original explanation. The *did* explanation had been given already by D. von Stade (d. 1718, see Collitz, *Das schwache präteritum*, p. 1); Rask (P 270, not mentioned by Collitz) says: "Whence this *d* or *t* has come is not easy to tell, as it is not found in Latin and Greek, but as it is evident from the Icelandic grammar that it is closely connected with the past participle and is also found in the preterit subjunctive, it seems clear that it must have been an old characteristic of the past tense in every mood, but was lost

in Greek when the above-mentioned participles in *tos* disappeared from the verbs" (cf. Ch. XIX § 12).

With regard to the vowels, Bopp in AC has the interesting theory that it is only through a defect in the alphabet that Sanskrit appears to have *a* in so many places; he believes that the spoken language had often "the short Italian *e* and *o*," where *a* was written. "If this was the case, we can give a reason why, in words common to the Sanskrit and Greek, the Indian *akāra* [that is, short *a*] so often corresponds to ε and ο, as, for instance, *asti*, he is, ἐστί; *patis*, husband, πόσις; *ambaras*, sky, ὄμβρος, rain, etc." Later, unfortunately, Bopp came under the influence of Grimm, who, as we saw, on speculative grounds admitted in the primitive language only the three vowels *a*, *i*, *u*, and Bopp and his followers went on believing that the Sanskrit *a* represented the original state of language, until the discovery of the 'palatal law' (about 1880) showed (what Bopp's occasional remark might otherwise easily have led up to, if he had not himself discarded it) that the Greek tripartition into *a*, *e*, *o* represented really a more original state of things.

II.—§ 7. Bopp continued.

In a chapter on the roots in AC (not found in C), Bopp contrasts the structure of Semitic roots and of our own; in Semitic languages roots must consist of three letters, neither more nor less, and thus generally contain two syllables, while in Sanskrit, Greek, etc., the character of the root "is not to be determined by the number of letters, but by that of the syllables, of which they contain only one"; thus a root like *i*, 'to go,' would be unthinkable in Arabic. The consequence of this structure of the roots is that the inner changes which play such a large part in expressing grammatical modifications in Semitic languages must be much more restricted in our family of languages. These changes were what F. Schlegel termed flexions and what Bopp himself, two years before (C 7), had named "the truly organic way" of expressing relation and mentioned as a wonderful flexibility found in an extraordinary degree in Sanskrit, by the side of which composition with the verb 'to be' is found only occasionally. Now, however, in 1820, Bopp repudiates Schlegel's and his own previous assumption that 'flexion' was characteristic of Sanskrit in contradistinction to other languages in which grammatical modifications were expressed by the addition of suffixes. On the contrary, while holding that both methods are employed in all languages, Chinese perhaps alone excepted, he now thinks that it is the suffix method which is prevalent in Sanskrit, and that "the only real inflexions . . . possible

in a language, whose elements are monosyllables, are the change of their vowels and the repetition of their radical consonants, otherwise called reduplication." It will be seen that Bopp here avoids both the onesidedness found in Schlegel's division of languages and the other onesidedness which we shall encounter in later theories, according to which *all* grammatical elements are originally independent subordinate roots added to the main root.

In his *Vocalismus* (1827, reprinted 1836) Bopp opposes Grimm's theory that the changes for which Grimm had introduced the term *ablaut* were due to psychological causes; in other words, possessed an inner meaning from the very outset. Bopp inclined to a mechanical explanation[1] and thought them dependent on the weight of the endings, as shown by the contrast between Sanskr. *vēda*, Goth. *vait*, Gr. *oĩda* and the plural, respectively *vidima*, *vitum*, *ídmen*. In this instance Bopp is in closer agreement than Grimm with the majority of younger scholars, who see in apophony (ablaut) an originally non-significant change brought about mechanically by phonetic conditions, though they do not find these in the 'weight' of the ending, but in the primeval accent: the accentuation of Sanskrit was not known to Bopp when he wrote his essay.

The personal endings of the verbs had already been identified with the corresponding pronouns by Scheidius (1790) and Rask (P 258); Bopp adopts the same view, only reproaching Scheidius for thinking exclusively of the nominative forms of the pronouns.

It thus appears that in his early work Bopp deals with a great many general problems, but his treatment is suggestive rather than exhaustive or decisive, for there are too many errors in details and his whole method is open to serious criticism. A modern reader is astonished to see the facility with which violent changes of sounds, omissions and transpositions of consonants, etc., are gratuitously accepted. Bopp never reflected as deeply as Rask did on what constitutes linguistic kinship, hence in C he accepts the common belief that Persian was related more closely to German than to Sanskrit, and in later life he tried to establish a relationship between the Malayo-Polynesian and the Indo-European languages. But in spite of all this it must be recognized that in his long laborious life he accomplished an enormous amount of highly meritorious work, not only in Sanskrit philology, but also in comparative grammar, in which he gradually freed himself of his worst methodical errors. He was constantly widening his range of vision, taking intoconsideration more and more cognate languages. The ingenious way in which he explained the curious Keltic shiftings in initial

[1] Probably under the influence of Humboldt, who wrote to him (September 1826): "Absichtlich grammatisch ist gewiss kein vokalwechsel."

consonants (which had so puzzled Rask as to make him doubt of a connexion of these languages with our family, but which Bopp showed to be dependent on a lost final sound of the preceding word) definitely and irrefutably established the position of those languages. Among other things that might be credited to his genius, I shall select his explanation of the various declensional classes as determined by the final sound of the stem. But it is not part of my plan to go into many details; suffice it to say that Bopp's great *Vergleichende grammatik* served for long years as the best, or really the only, exposition of the new science, and vastly contributed not only to elucidate obscure points, but also to make comparative grammar as popular as it is possible for such a necessarily abstruse science to be.

In Bopp's *Vergleichende grammatik* (2. § 108) he gives his classification of languages in general. He rejects Fr. Schlegel's bipartition, but his growing tendency to explain everything in Aryan grammar, even the inner changes of Sanskrit roots, by mechanical causes makes him modify A. W. Schlegel's tripartition and place our family of languages with the second instead of the third class. His three classes are therefore as follows: I. Languages without roots proper and without the power of composition, and thus without organism or grammar; to this class belongs Chinese, in which most grammatical relations are only to be recognized by the position of the words. II. Languages with monosyllabic roots, capable of composition and acquiring their organism, their grammar, nearly exclusively in this way; the main principle of word formation is the connexion of verbal and pronominal roots. To this class belong the Indo-European languages, but also all languages not comprised under the first or the third class. III. Languages with disyllabic roots and three necessary consonants as sole bearers of the signification of the word. This class includes only the Semitic languages. Grammatical forms are here created not only by means of composition, as in the second class, but also by inner modification of the roots.

It will be seen that Bopp here expressly avoids both expressions 'agglutination' and 'flexion,' the former because it had been used of languages contrasted with Aryan, while Bopp wanted to show the essential identity of the two classes; the latter because it had been invested with much obscurity on account of Fr. Schlegel's use of it to signify inner modification only. According to Schlegel, only such instances as English *drink / drank / drunk* are pure flexion, while German *trink-e / trank / ge-trunk-en*, and still more Greek *leip-ō / e-lip-on / le-loip-a*, besides an element of 'flexion' contain also affixed elements. It is clear that no language can use 'flexion' (in Schlegel's sense) exclusively, and consequently this

cannot be made a principle on which to erect a classification of languages generally. Schlegel's use of the term 'flexion' seems to have been dropped by all subsequent writers, who use it so as to include what is actually found in the grammar of such languages as Sanskrit and Greek, comprising under it inner and outer modifications, but of course not requiring both in the same form.

In view of the later development of our science, it is worthy of notice that neither in the brothers Schlegel nor in Bopp do we yet meet with the idea that the classes set up are not only a distribution of the languages found side by side in the world at this time, but also represent so many stages in historical development; indeed, Bopp's definitions are framed so as positively to exclude any development from his Class II to Class III, as the character of the underlying roots is quite heterogeneous. On the other hand, Bopp's tendency to explain Aryan endings from originally independent roots paved the way for the theory of isolation, agglutination and flexion as three successive stages of the same language.

In his first work (C 56) Bopp had already hinted that in the earliest period known to us languages had already outlived their most perfect state and were in a process of decay; and in his review of Grimm (1827) he repeats this: "We perceive them in a condition in which they may indeed be progressive syntactically but have, as far as grammar is concerned, lost more or less of what belonged to the perfect structure, in which the separate members stand in exact relation to each other and in which everything derived has still a visible and unimpaired connexion with its source" (Voc. 2). We shall see kindred ideas in Humboldt and Schleicher.

To sum up: Bopp set about discovering the ultimate origin of flexional elements, but instead of that he discovered Comparative Grammar—"à peu près comme Christophe Colomb a découvert l'Amérique en cherchant la route des Indes," as A. Meillet puts it (LI 413). A countryman of Rask may be forgiven for pushing the French scholar's brilliant comparison still further: in the same way as Norsemen from Iceland had discovered America before Columbus, without imagining that they were finding the way to India, just so Rasmus Rask through his Icelandic studies had discovered Comparative Grammar before Bopp, without needing to take the circuitous route through Sanskrit.

II.—§ 8. Wilhelm von Humboldt.

This will be the proper place to mention one of the profoundest thinkers in the domain of linguistics, Wilhelm von Humboldt (1767–1835), who, while playing an important part in the political

world, found time to study a great many languages and to think deeply on many problems connected with philology and ethnography.[1]

In numerous works, the most important of which, *Ueber die Kawisprache auf der Insel Jawa*, with the famous introduction "Ueber die Verschiedenheit des menschlichen Sprachbaues und ihren Einfluss auf die geistige Entwickelung des Menschengeschlechts," was published posthumously in 1836–40, Humboldt developed his linguistic philosophy, of which it is not easy to give a succinct idea, as it is largely couched in a most abstruse style; it is not surprising that his admirer and follower, Heymann Steinthal, in a series of books, gave as many different interpretations of Humboldt's thoughts, each purporting to be more correct than its predecessors. Still, I believe the following may be found to be a tolerably fair rendering of some of Humboldt's ideas.

He rightly insists on the importance of seeing in language a continued activity. Language is not a substance or a finished work, but action (Sie selbst ist kein werk, *ergon*, sondern eine tätigkeit, *energeia*). Language therefore cannot be defined except genetically. It is the ever-repeated labour of the mind to utilize articulated sounds to express thoughts. Strictly speaking, this is a definition of each separate act of speech; but truly and essentially a language must be looked upon as the totality of such acts.

[1] Humboldt's relation to Bopp's general ideas is worth studying; see his letters to Bopp, printed as Nachtrag to S. Lefman's *Franz Bopp, sein leben und seine wissenschaft* (Berlin, 1897). He is (p. 5) on the whole of Bopp's opinion that flexions have arisen through agglutination of syllables, the independent meaning of which was lost; still, he is not certain that all flexion can be explained in that way, and especially doubts it in the case of 'umlaut,' under which term he here certainly includes 'ablaut,' as seen by his reference (p. 12) to Greek future *stalô* from *stěllō*; he adds that "some flexions are at the same time so significant and so widely spread in languages that I should be inclined to call them original; for example, our *i* of the dative and *m* of the same case, both of which by their sharper sound seem intended to call attention to the peculiar nature of this case, which does not, like the other cases, denote a simple, but a double relation" (repeated p. 10). Humboldt doubts Bopp's identification of the temporal augment with the *a* privativum. He says (p. 14) that cases often originate from prepositions, as in American languages and in Basque, and that he has always explained our genitive, as in G. *manne-s*, as a remnant of *aus*. This is evidently wrong, as the *s* of *aus* is a special High German development from *t*, while the *s* of the genitive is also found in languages which do not share in this development of *t*. But the remark is interesting because, apart from the historical proof to the contrary which we happen to possess in this case, the derivation is no whit worse than many of the explanations resorted to by adherents of the agglutinative theory. But Humboldt goes on to say that in Greek and Latin he is not prepared to maintain that one single case is to be explained in this way. Humboldt probably had some influence on Bopp's view of the weak preterit, for he is skeptical with regard to the *did* explanation and inclines to connect the ending with the participle in *t*.

For the words and rules, which according to our ordinary notions make up a language, exist really only in the act of connected speech. The breaking up of language into words and rules is nothing but a dead product of our bungling scientific analysis (Versch 41). Nothing in language is static, everything is dynamic. Language has nowhere any abiding place, not even in writing; its dead part must continually be re-created in the mind; in order to exist it must be spoken or understood, and so pass in its entirety into the subject (ib. 63).

Humboldt speaks continually of languages as more perfect or less perfect. Yet "no language should be condemned or depreciated, not even that of the most savage tribe, for each language is a picture of the original aptitude for language" (Versch 304). In another place he speaks about special excellencies even of languages that cannot in themselves be recognized as superlatively good instruments of thought. Undoubtedly Chinese of the old style carries with it an impressive dignity through the immediate succession of nothing but momentous notions; it acquires a simple greatness because it throws away all unnecessary accessory elements and thus, as it were, takes flight to pure thinking. Malay is rightly praised for its ease and the great simplicity of its constructions. The Semitic languages retain an admirable art in the nice discrimination of sense assigned to many shades of vowels. Basque possesses a particular vigour, dependent on the briefness and boldness of expression imparted by the structure of its words and by their combination. Delaware and other American languages express in one word a number of ideas for which we should require many words. The human mind is always capable of producing something admirable, however one-sided it may be; such special points decide nothing with regard to the rank of languages (Versch 189 f.). We have here, as indeed continually in Humboldt, a valuation of languages with many brilliant remarks, but on the whole we miss the concrete details abounding in Jenisch's work. Humboldt, as it were, lifts us to a higher plane, where the air may be purer, but where it is also thinner and not seldom cloudier as well.

According to Humboldt, each separate language, even the most despised dialect, should be looked upon as an organic whole, different from all the rest and expressing the individuality of the people speaking it; it is characteristic of one nation's psyche, and indicates the peculiar way in which that nation attempts to realize the ideal of speech. As a language is thus symbolic of the national character of those who speak it, very much in each language had its origin in a symbolic representation of the notion it stands for; there is a natural nexus between certain sounds and certain general ideas, and consequently we often find similar sounds used for the

same, or nearly the same, idea in languages not otherwise related to one another.

Humboldt is opposed to the idea of 'general' or 'universal' grammar as understood in his time; instead of this purely deductive grammar he would found an inductive general grammar, based upon the comparison of the different ways in which the same grammatical notion was actually expressed in a variety of languages. He set the example in his paper on the Dual. His own studies covered a variety of languages; but his works do not give us many actual concrete facts from the languages he had studied; he was more interested in abstract reasonings on language in general than in details.

In an important paper, *Ueber das Entstehen der grammatischen Formen und ihren Einfluss auf die Ideenentwickelung* (1822), he says that language at first denotes only objects, leaving it to the hearer to understand or guess at (hinzudenken) their connexion. By and by the word-order becomes fixed, and some words lose their independent use and sound, so that in the second stage we see grammatical relations denoted through word-order and through words vacillating between material and formal significations. Gradually these become affixes, but the connexion is not yet firm, the joints are still visible, the result being an aggregate, not yet a unit. Thus in the third stage we have something analogous to form, but not real form. This is achieved in the fourth stage, where the word is *one*, only modified in its grammatical relations through the flexional sound; each word belongs to one definite part of speech, and form-words have no longer any disturbing material signification, but are pure expressions of relation. Such words as Lat. *amavit* and Greek *epoiēsas* are truly grammatical forms in contradistinction to such combinations of words and syllables as are found in cruder languages, because we have here a fusion into one whole, which causes the signification of the parts to be forgotten and joins them firmly under one accent. Though Humboldt thus thinks flexion developed out of agglutination, he distinctly repudiates the idea of a gradual development and rather inclines to something like a sudden crystallization (see especially Steinthal's ed., p. 585).

Humboldt's position with regard to the classification of languages is interesting. In his works we continually meet with the terms agglutination[1] and flexion by the side of a new term, 'incorporation.' This he finds in full bloom in many American languages, such as Mexican, where the object may be inserted into the verbal form between the element indicating person and the

[1] Humboldt seems to be the inventor of this term (1821; see Streitberg, IF 35. 191).

root. Now, Humboldt says that besides Chinese, which has no grammatical form, there are three possible forms of languages, the flexional, the agglutinative and the incorporating, but he adds that all languages contain one or more of these forms (Versch 301). He tends to deny the existence of any exclusively agglutinative or exclusively flexional language, as the two principles are generally commingled (132). Flexion is the only method that gives to the word the true inner firmness and at the same time distributes the parts of the sentence according to the necessary interlacing of thoughts, and thus undoubtedly represents the pure principle of linguistic structure. Now, the question is, what language carries out this method in the most consistent way? True perfection may not be found in any one language: in the Semitic languages we find flexion in its most genuine shape, united with the most refined symbolism, only it is not pursued consistently in all parts of the language, but restricted by more or less accidental laws. On the other hand, in the Sanskritic languages the compact unity of every word saves flexion from any suspicion of agglutination; it pervades all parts of the language and rules it in the highest freedom (Versch 188). Compared with incorporation and with the method of loose juxtaposition without any real word-unity, flexion appears as an intuitive principle born of true linguistic genius (ib.). Between Sanskrit and Chinese, as the two opposed poles of linguistic structure, each of them perfect in the consistent following one principle, we may place all the remaining languages (ib. 326). But the languages called agglutinative have nothing in common except just the negative trait that they are neither isolating nor flexional. The structural diversities of human languages are so great that they make one despair of a fully comprehensive classification (ib. 330).

According to Humboldt, language is in continued development under the influence of the changing mental power of its speakers. In this development there are naturally two definite periods, one in which the creative instinct of speech is still growing and active, and another in which a seeming stagnation begins and then an appreciable decline of that creative instinct. Still, the period of decline may initiate new principles of life and new successful changes in a language (Versch 184). In the form-creating period nations are occupied more with the language than with its purpose, i.e. with what it is meant to signify. They struggle to express thought, and this craving in connexion with the inspiring feeling of success produces and sustains the creative power of language (ib. 191). In the second period we witness a wearing-off of the flexional forms. This is found less in languages reputed crude or rough than in refined ones. Language is exposed to the most

violent changes when the human mind is most active, for then it considers too careful an observation of the modifications of sound as superfluous. To this may be added a want of perception of the poetic charm inherent in the sound. Thus it is the transition from a more sensuous to a more intellectual mood that works changes in a language. In other cases less noble causes are at work. Rougher organs and less sensitive ears are productive of indifference to the principle of harmony, and finally a prevalent practical trend may bring about abbreviations and omissions of all kinds in its contempt for everything that is not strictly necessary for the purpose of being understood. While in the first period the elements still recall their origin to man's consciousness, there is an æsthetic pleasure in developing the instrument of mental activity; but in the second period language serves only the practical needs of life. In this way such a language as English may reduce its forms so as to resemble the structure of Chinese; but there will always remain traces of the old flexions; and English is no more incapable of high excellences than German (Versch 282–6). What these are Humboldt, however, does not tell us.

II.—§ 9. Grimm Once More.

Humboldt here foreshadowed and probably influenced ideas to which Jacob Grimm gave expression in two essays written in his old age and which it will be necessary here to touch upon. In the essay on the pedantry of the German language (*Ueber das pedantische in der deutschen sprache*, 1847), Grimm says that he has so often praised his mother-tongue that he has acquired the right once in a while to blame it. If pedantry had not existed already, Germans would have invented it; it is the shadowy side of one of their virtues, painstaking accuracy and loyalty. Grimm's essay is an attempt at estimating a language, but on the whole it is less comprehensive and less deep than that of Jenisch. Grimm finds fault with such things as the ceremoniousness with which princes are spoken to and spoken of (*Durchlauchtigster*, *allerhöchstderselbe*), and the use of the pronoun *Sie* in the third person plural in addressing a single person; he speaks of the clumsiness of the auxiliaries for the passive, the past and the future, and of the word-order which makes the Frenchman cry impatiently "J'attends le verbe." He blames the use of capitals for substantives and other peculiarities of German spelling, but gives no general statement of the principles on which the comparative valuation of different languages should be based, though in many passages we see that he places the old stages of the language very much higher than the language of his own day.

The essay on the origin of language (1851) is much more important, and may be said to contain the mature expression of all Grimm's thoughts on the philosophy of language. Unfortunately, much of it is couched in that high-flown poetical style which may be partly a consequence of Grimm's having approached the exact study of language through the less exact studies of popular poetry and folklore; this style is not conducive to clear ideas, and therefore renders the task of the reporter very difficult indeed. Grimm at some length argues against the possibility of language having been either created by God when he created man or having been revealed by God to man after his creation. The very imperfections and changeability of language speak against its divine origin. Language as gradually developed must be the work of man himself, and therein is different from the immutable cries and songs of the lower creation. Nature and natural instinct have no history, but mankind has. Man and woman were created as grown-up and marriageable beings, and there must have been created at once more than one couple, for if there had been only one couple, there would have been the possibility that the one mother had borne only sons or only daughters, further procreation being thus rendered impossible (!), not to mention the moral objections to marriages between brother and sister. How these once created beings, human in every respect except in language, were able to begin talking and to find themselves understood, Grimm does not really tell us; he uses such expressions as 'inventors' of words, but apart from the symbolical value of some sounds, such as *l* and *r*, he thinks that the connexion of word and sense was quite arbitrary. On the other hand, he can tell us a great deal about the first stage of human speech: it contained only the three vowels *a*, *i*, *u*, and only few consonant groups; every word was a monosyllable, and abstract notions were at first absent. The existence in all (?) old languages of masculine and feminine flexions must be due to the influence of women on the formation of language. Through the distinction of genders Grimm says that regularity and clearness were suddenly brought about in everything concerning the noun as by a most happy stroke of fortune. Endings to indicate person, number, tense and mood originated in added pronouns and auxiliary words, which at first were loosely joined to the root, but later coalesced with it. Besides, reduplication was used to indicate the past; and after the absorption of the reduplicational syllable the same effect was obtained in German through apophony. All nouns presuppose verbs, whose material sense was applied to the designation of things, as when G. *hahn* ('cock') was thus called from an extinct verb *hanan*, corresponding to Lat. *canere*, 'to sing.'

In what Grimm says about the development of language it is easy to trace the influence of Humboldt's ideas, though they are worked out with great originality. He discerns three stages, the last two alone being accessible to us through historical documents. In the first period we have the creation and growing of roots and words, in the second the flourishing of a perfect flexion, and in the third a tendency to thoughts, which leads to the giving up of flexion as not yet (?) satisfactory. They may be compared to leaf, blossom and fruit, "the beauty of human speech did not bloom in its beginning, but in its middle period; its ripest fruits will not be gathered till some time in the future." He thus sums up his theory of the three stages: "Language in its earliest form was melodious, but diffuse and straggling; in its middle form it was full of intense poetical vigour; in our own days it seeks to remedy the diminution of beauty by the harmony of the whole, and is more effective though it has inferior means." In most places Grimm still speaks of the downward course of linguistic development; all the oldest languages of our family "show a rich, pleasant and admirable perfection of form, in which all material and spiritual elements have vividly interpenetrated each other," while in the later developments of the same languages the inner power and subtlety of flexion has generally been given up and destroyed, though partly replaced by external means and auxiliary words. On the whole, then, the history of language discloses a descent from a period of perfection to a less perfect condition. This is the point of view that we meet with in nearly all linguists; but there is a new note when Grimm begins vaguely and dimly to see that the loss of flexional forms is sometimes compensated by other things that may be equally valuable or even more valuable; and he even, without elaborate arguments, contradicts his own main contention when he says that "human language is retrogressive only apparently and in particular points, but looked upon as a whole it is progressive, and its intrinsic force is continually increasing." He instances the English language, which by sheer making havoc of all old phonetic laws and by the loss of all flexions has acquired a great force and power, such as is found perhaps in no other human language. Its wonderfully happy structure resulted from the marriage of the two noblest languages of Europe; therefore it was a fit vehicle for the greatest poet of modern times, and may justly claim the right to be called a world's language; like the English people, it seems destined to reign in future even more than now in all parts of the earth. This enthusiastic panegyric forms a striking contrast to what the next great German scholar with whom we have to deal, Schleicher, says about the same language, which to him shows only "how rapidly the language of a nation important both in history and literature can decline" (II. 231).

CHAPTER III

MIDDLE OF NINETEENTH CENTURY

§ 1. After Bopp and Grimm. § 2. K. M. Rapp. § 3. J. H. Bredsdorff. § 4. August Schleicher. § 5. Classification of Languages. § 6. Reconstruction. § 7. Curtius, Madvig and Specialists. § 8. Max Müller and Whitney.

III.—§ 1. After Bopp and Grimm.

Bopp and Grimm exercised an enormous influence on linguistic thought and linguistic research in Germany and other countries. Long even before their death we see a host of successors following in the main the lines laid down in their work, and thus directly and indirectly they determined the development of this science for a long time. Through their efforts so much new light had been shed on a number of linguistic phenomena that these took a quite different aspect from that which they had presented to the previous generation; most of what had been written about etymology and kindred subjects in the eighteenth century seemed to the new school utterly antiquated, mere fanciful vagaries of incompetent blunderers, whereas now scholars had found firm ground on which to raise a magnificent structure of solid science. This feeling was especially due to the undoubted recognition of one great family of languages to which the vast majority of European languages, as well as some of the most important Asiatic languages, belonged: here we had one firmly established fact of the greatest magnitude, which at once put an end to all the earlier whimsical attempts to connect Latin and Greek words with Hebrew roots. As for the name of that family of languages, Rask hesitated between different names, 'European,' 'Sarmatic' and finally 'Japhetic' (as a counterpart of the Semitic and the Hamitic languages); Bopp at first had no comprehensive name, and on the title-page of his *Vergl. grammatik* contents himself with enumerating the chief languages described, but in the work itself he says that he prefers the name 'Indo-European,' which has also found wide acceptance, though more in France, England and Skandinavia than in Germany. Humboldt for a long while said 'Sanskritic,' but later he adopted 'Indo-Germanic,' and this has been the generally recognized name used in Germany, in spite of Bopp's protest-who said that 'Indo-klassisch' would be more to the point; 'Indo,

Keltic' has also been proposed as designating the family through its two extreme members to the East and West. But all these compound names are clumsy without being completely pertinent, and it seems therefore much better to use the short and convenient term 'the Aryan languages': Aryan being the oldest name by which any members of the family designated themselves (in India and Persia).[1]

Thanks to the labours of Bopp and Grimm and their co-workers and followers, we see also a change in the status of the study of languages. Formerly this was chiefly a handmaiden to philology —but as this word is often in English used in a sense unknown to other languages and really objectionable, namely as a synonym of (comparative) study of languages, it will be necessary first to say a few words about the terminology of our science. In this book I shall use the word 'philology' in its continental sense, which is often rendered in English by the vague word 'scholarship,' meaning thereby the study of the specific culture of one nation; thus we speak of Latin philology, Greek philology, Icelandic philology, etc. The word 'linguist,' on the other hand, is not infrequently used in the sense of one who has merely a practical knowledge of some foreign language; but I think I am in accordance with a growing number of scholars in England and America if I call such a man a 'practical linguist' and apply the word 'linguist' by itself to the scientific student of language (or of languages); 'linguistics' then becomes a shorter and more convenient name for what is also called the science of language (or of languages).

Now that the reader understands the sense in which I take these two terms, I may go on to say that the beginning of the nineteenth century witnessed a growing differentiation between philology and linguistics in consequence of the new method introduced by comparative and by historical grammar; it was nothing less than a completely new way of looking at the facts of language and trying to trace their origin. While to the philologist the Greek or Latin language, etc., was only a means to an end, to the linguist it was an end in itself. The former saw in it a valuable, and in fact an indispensable, means of gaining a first-hand knowledge of the literature which was his chief concern, but the linguist cared not for the literature as such, but studied languages for their own sake, and might even turn to languages destitute of literature because they were able to throw some light on the life of language in general or on forms in related languages. The philologist as such would not think of studying the Gothic of Wulfila, as a know-

[1] It has been objected to the use of Aryan in this wide sense that the name is also used in the restricted sense of Indian + Iranic; but no separate name is needed for that small group other than Indo-Iranic.

ledge of that language gives access only to a translation of parts of the Bible, the ideas of which can be studied much better elsewhere; but to the linguist Gothic was extremely valuable. The differentiation, of course, is not an absolute one; besides being linguists in the new sense, Rask was an Icelandic philologist, Bopp a Sanskrit philologist, and Grimm a German philologist; but the tendency towards the emancipation of linguistics was very strong in them, and some of their pupils were pure linguists and did no work in philology.

In breaking away from philology and claiming for linguistics the rank of a new and independent science, the partisans of the new doctrine were apt to think that not only had they discovered a new method, but that the object of their study was different from that of the philologists, even when they were both concerned with language. While the philologist looked upon language as part of the culture of some nation, the linguist looked upon it as a natural object; and when in the beginning of the nineteenth century philosophers began to divide all sciences into the two sharply separated classes of mental and natural sciences (geistes- und naturwissenschaften), linguists would often reckon their science among the latter. There was in this a certain amount of pride or boastfulness, for on account of the rapid rise and splendid achievements of the natural sciences at that time, it began to be a matter of common belief that they were superior to, and were possessed of a more scientific method than, the other class—the same view that finds an expression in the ordinary English usage, according to which 'science' means natural science and the other domains of human knowledge are termed the 'arts' or the 'humanities.'

We see the new point of view in occasional utterances of the pioneers of linguistic science. Rask expressly says that "Language is a natural object and its study resembles natural history" (SA 2. 502); but when he repeats the same sentence (in *Retskrivningslære*, 8) it appears that he is thinking of language as opposed to the more artificial writing, and the contrast is not between mental and natural science, but between art and nature, between what can and what cannot be consciously modified by man—it is really a different question.

Bopp, in his review of Grimm (1827, reprinted *Vocalismus*, 1836, p. 1), says: "Languages are to be considered organic natural bodies, which are formed according to fixed laws, develop as possessing an inner principle of life, and gradually die out because they do not understand themselves any longer [!], and therefore cast off or mutilate their members or forms, which were at first significant, but gradually have become more of an extrinsic mass.

. . . It is not possible to determine how long languages may preserve their full vigour of life and of procreation," etc. This is highly figurative language which should not be taken at its face value; but expressions like these, and the constant use of such words as 'organic' and 'inorganic' in speaking of formations in languages, and 'organism' of the whole language, would tend to widen the gulf between the philological and the linguistic point of view. Bopp himself never consistently followed the naturalistic way of looking at language, but in § 4 of this chapter we shall see that Schleicher was not afraid of going to extremes and building up a consistent natural science of language.

The cleavage between philology and linguistics did not take place without arousing warm feeling. Classical scholars disliked the intrusion of Sanskrit everywhere; they did not know that language and did not see the use of it. They resented the way in which the new science wanted to reconstruct Latin and Greek grammar and to substitute new explanations for those which had always been accepted. Those Sanskritists chatted of guna and vrddhi and other barbaric terms, and even ventured to talk of a locative case in Latin, as if the number of cases had not been settled once for all long ago![1]

Classicists were no doubt perfectly right when they reproached comparativists for their neglect of syntax, which to them was the most important part of grammar; they were also in some measure right when they maintained that linguists to a great extent contented themselves with a superficial knowledge of the languages compared, which they studied more in grammars and glossaries than in living texts, and sometimes they would even exult when they found proof of this in solecisms in Bopp's Latin translations from Sanskrit, and even on the title-page of *Glossarium Sanscritum a Franzisco Bopp.* Classical scholars also looked askance at the growing interest in the changes of sounds, or, as it was then usual to say, of letters. But when they were apt here to quote the scriptural phrase about the letter that killeth, while the spirit giveth life, they overlooked the fact that Nature has rendered it impossible for anyone to penetrate to the mind of anyone else except through its outer manifestations, and that it is consequently impossible to get at the spirit of a language except through its sounds: phonology must therefore form the necessary basis and prerequisite of the scientific study of any group of languages. Still, it cannot be denied that sometimes comparative phonology was treated in such a mechanical way as partly to dehumanize the study of language.

[1] In Lefmann's book on Bopp, pp. 292 and 299, there are some interesting quotations on this point.

When we look back at this period in the history of linguistics, there are certain tendencies and characteristics that cannot fail to catch our attention. First we must mention the prominence given to Sanskrit, which was thought to be the unavoidable requirement of every comparative linguist. In explaining anything in any of the cognate languages the etymologist always turned first to Sanskrit words and Sanskrit forms. This standpoint is found even much later, for instance in Max Müller's *Inaugural Address* (1868, Ch. 19): "Sanskrit certainly forms the only sound foundation of Comparative Philology, and it will always remain the only safe guide through all its intricacies. A comparative philologist without a knowledge of Sanskrit is like an astronomer without a knowledge of mathematics." A linguist of a later generation may be excused for agreeing rather with Ellis, who says (*Transact. Philol. Soc.*, 1873–4, 21): "Almost in our own days came the discovery of Sanskrit, and philology proper began—but, alas! at the wrong end. Now, here I run great danger of being misunderstood. Although for a scientific sifting of the nature of language I presume to think that beginning at Sanskrit was unfortunate, yet I freely admit that, had that language not been brought into Europe . . . our knowledge of language would have been in a poor condition indeed. . . . We are under the greatest obligations to those distinguished men who have undertaken to unravel its secrets and to show its connexion with the languages of Europe. Yet I must repeat that for the pure science of language, to begin with Sanskrit was as much beginning at the wrong end as it would have been to commence zoology with palæontology—the relations of life with the bones of the dead."

Next, Bopp and his nearest successors were chiefly occupied with finding likenesses between the languages treated and discovering things that united them. This was quite natural in the first stage of the new science, but sometimes led to one-sidedness, the characteristic individuality of each language being lost sight of, while forms from many countries and many times were mixed up in a hotch-potch. Rask, on account of his whole mental equipment, was less liable to this danger than most of his contemporaries; but Pott was evidently right when he warned his fellow-students that their comparative linguistics should be supplemented by separative linguistics (*Zählmethode*, 229), as it has been to a great extent in recent years.

Still another feature of the linguistic science of these days is the almost exclusive occupation of the student with dead languages. It was quite natural that the earliest comparativists should first give their attention to the oldest stages of the languages compared, since these alone enabled them to prove the essential

kinship between the different members of the great Aryan family. In Grimm's grammar nearly all the space is taken up with Gothic, Old High German, Old Norse, etc., and comparatively little is said about recent developments of the same languages. In Bopp's comparative grammar classical Greek and Latin are, of course, treated carefully, but Modern Greek and the Romanic languages are not mentioned (thus also in Schleicher's *Compendium* and in Brugmann's *Grammar*), such later developments being left to specialists who were more or less considered to be outside the sphere of Comparative Linguistics and even of the science of language in general, though it would have been a much more correct view to include them in both, and though much more could really be learnt of the life of language from these studies than from comparisons made in the spirit of Bopp.

The earlier stages of different languages, which were compared by linguists, were, of course, accessible only through the medium of writing; we have seen that the early linguists spoke constantly of letters and not of sounds. But this vitiated their whole outlook on languages. These were scarcely ever studied at first-hand, and neither in Bopp nor in Grimm nor in Pott or Benfey do we find such first-hand observations of living spoken languages as play a great rôle in the writings of Rask and impart an atmosphere of soundness to his whole manner of looking at languages. If languages were called natural objects, they were not yet studied as such or by truly naturalistic methods.

When living dialects were studied, the interest constantly centred round the archaic traits in them; every survival of an old form, every trace of old sounds that had been dropped in the standard speech, was greeted with enthusiasm, and the significance of these old characteristics greatly exaggerated, the general impression being that popular dialects were always much more conservative than the speech of educated people. It was reserved for a much later time to prove that this view is completely erroneous, and that popular dialects, in spite of many archaic details, are on the whole further developed than the various standard languages with their stronger tradition and literary reminiscences.

III.—§ 2. K. M. Rapp.

It was from this archæological point of view only that Grimm encouraged the study of dialects, but he expressly advised students not to carry the research too far in the direction of discriminating minutiæ of sounds, because these had little bearing on the history of language as he understood it. In this connexion we may

mention an episode in the history of early linguistics that is symptomatic. K. M. Rapp brought out his *Versuch einer Physiologie der Sprache nebst historischer Entwickelung der abendländischen Idiome nach physiologischen Grundsätzen* in four volumes (1836, 1839, 1840, 1841). A physiological examination into the nature and classification of speech sounds was to serve only as the basis of the historical part, the grandiose plan of which was to find out how Greek, Latin and Gothic sounded, and then to pursue the destinies of these sound systems through the Middle Ages (Byzantine Greek, Old Provençal, Old French, Old Norse, Anglo-Saxon, Old High German) to the present time (Modern Greek, Italian, Spanish, etc., down to Low and High German, with different dialects). To carry out this plan Rapp was equipped with no small knowledge of the earlier stages of these languages and a not contemptible first-hand observation of living languages. He relates how from his childhood he had a "morbidly sharpened ear for all acoustic impressions"; he had early observed the difference between dialectal and educated speech and taken an interest in foreign languages, such as French, Italian and English. He visited Denmark, and there made the acquaintance of and became the pupil of Rask; he often speaks of him and his works in terms of the greatest admiration. After his return he took up the study of Jacob Grimm; but though he speaks always very warmly about the other parts of Grimm's work, Grimm's phonology disappointed him. "Grimm's theory of letters I devoured with a ravenous appetite for all the new things I had to learn from it, but also with heartburning on account of the equally numerous things that warred against the whole of my previous research with regard to the nature of speech sounds; fascinated though I was by what I read, it thus made me incredibly miserable." He set to his great task with enthusiasm, led by the conviction that "the historical material gives here only one side of the truth, and that the living language in all its branches that have never been committed to writing forms the other and equally important side which is still far from being satisfactorily investigated." It is easy to understand that Rapp came into conflict with Grimm's *Buchstabenlehre*, that had been based exclusively on written forms, and Rapp was not afraid of expressing his unorthodox views in what he himself terms "a violent and arrogating tone." No wonder, therefore, that his book fell into disgrace with the leaders of linguistics in Germany, who noticed its errors and mistakes, which were indeed numerous and conspicuous, rather than the new and sane ideas it contained. Rapp's work is extraordinarily little known; in Raumer's *Geschichte der germanischen Philologie* and similar works it is not even mentioned, and when I disinterred it

from undeserved oblivion in my *Fonetik* (1897, p. 35; cf. *Die neueren Sprachen*, vol. xiii, 1904) it was utterly unknown to the German phoneticians of my acquaintance. Yet not only are its phonetic observations [1] deserving of praise, but still more its whole plan, based as it is on a thorough comprehension of the mutual relations of sounds and writing, which led Rapp to use phonetic transcription throughout, even in connected specimens both of living and dead languages; that this is really the only way in which it is possible to obtain a comprehensive and living understanding of the sound-system of any language (as well as to get a clear perception of the extent of one's own ignorance of it!) has not yet been generally recognized. The science of language would have made swifter and steadier progress if Grimm and his successors had been able to assimilate the main thoughts of Rapp.

III.—§ 3. J. H. Bredsdorff.

Another (and still earlier) work that was overlooked at the time was the little pamphlet *Om Aarsagerne til Sprogenes Forandringer* (1821) by the Dane J. H. Bredsdorff. Bopp and Grimm never really asked themselves the fundamental question, How is it that language changes: what are the driving forces that lead in course of time to such far-reaching differences as those we find between Sanskrit and Latin, or between Latin and French? Now, this is exactly the question that Bredsdorff treats in his masterly pamphlet. Like Rapp, he was a very good phonetician; but in the pamphlet that concerns us here he speaks not only of phonetic but of other linguistic changes as well. These he refers to the following causes, which he illustrates with well-chosen examples: (1) Mishearing and misunderstanding; (2) misrecollection; (3) imperfection of organs; (4) indolence: to this he inclines to refer nine-tenths of all those changes in the pronunciation of a language that are not due to foreign influences; (5) tendency towards analogy: here he gives instances from the speech of children and explains by analogy such phenomena as the extension of *s* to all genitives, etc.; (6) the desire to be distinct; (7) the need of expressing new ideas. He recognizes that there are changes that cannot be brought under any of these explanations, e.g. the Gothonic sound shift (cf. above, p. 43 note), and he emphasizes the many ways in which foreign nations or foreign languages may influence a language. Bredsdorff's explanations may not always be correct;

[1] For example, the correct appreciation of Scandinavian *o* sounds and especially the recognition of syllables without any vowel, for instance, in G. *mittel*, *schmeicheln*, E. *heaven*, *little*; this important truth was unnoticed by linguists till Sievers in 1876 called attention to it and Brugmann in 1877 used it in a famous article.

but what constitutes the deep originality of his little book is the way in which linguistic changes are always regarded in terms of human activity, chiefly of a psychological character. Here he was head and shoulders above his contemporaries; in fact, most of Bredsdorff's ideas, such as the power of analogy, were the same that sixty years later had to fight so hard to be recognized by the leading linguists of that time.[1]

III.—§ 4. August Schleicher.

In Rapp, and even more in Bredsdorff, we get a whiff of the scientific atmosphere of a much later time; but most of the linguists of the twenties and following decades (among whom A. F. Pott deserves to be specially named) moved in essentially the same grooves as Bopp and Grimm, and it will not be necessary here to deal in detail with their work.

August Schleicher (1821–68) in many ways marks the culmination of the first period of Comparative Linguistics, as well as the transition to a new period with different aims and, partially at any rate, a new method. His intimate knowledge of many languages, his great power of combination, his clear-cut and always lucid exposition—all this made him a natural leader, and made his books for many years the standard handbooks of linguistic science. Unlike Bopp and Grimm, he was exclusively a linguist, or, as he called it himself, 'glottiker,' and never tired of claiming for the science of linguistics ('glottik'), as opposed to philology, the rank of a separate natural science. Schleicher specialized in Slavonic and Lithuanian; he studied the latter language in its own home and took down a great many songs and tales from the mouths of the peasants; he was for some years a professor in the University of Prague, and there acquired a conversational knowledge of Czech; he spoke Russian, too, and thus in contradistinction to Bopp and Grimm had a first-hand knowledge of more than one foreign language; his interest in living speech is also manifested in his specimens of the dialect of his native town, *Volkstümliches aus Sonneberg*. When he was a child his father very severely insisted on the constant and correct use of the educated language at home; but the boy, perhaps all the more on account of the paternal prohibition, was deeply attracted to the

[1] A young German linguist, to whom I sent the pamphlet early in 1886, wrote to me: "Wenn man sich den spass machte und das ding übersetzte mit der bemerkung, es sei vor vier jahren erschienen, wer würde einem nicht trauen? Merkwürdig, dass solche sachen so unbemerkt, 'dem kleinen veilchen gleich,' dahinschwinden können." A short time afterwards the pamphlet was reprinted with a short preface by Vilh. Thomsen (Copenhagen, 1886).

popular dialect he heard from his playfellows and to the fascinating folklore of the old townspeople, which he was later to take down and put into print. In the preface he says that the acquisition of foreign tongues is rendered considerably easier through the habit of speaking two dialects from childhood.

What makes Schleicher particularly important for the purposes of this volume is the fact that in a long series of publications he put forth not only details of his science, but original and comprehensive views on the fundamental questions of linguistic theory, and that these had great influence on the linguistic philosophy of the following decades. He was, perhaps, the most consistent as well as one of the clearest of linguistic thinkers, and his views therefore deserve to be examined in detail and with the greatest care.

Apart from languages, Schleicher was deeply interested both in philosophy and in natural science, especially botany. From these he fetched many of the weapons of his armoury, and they coloured the whole of his theory of language. In his student days at Tübingen he became an enthusiastic adherent of the philosophy of Hegel, and not even the Darwinian sympathies and views of which he became a champion towards the end of his career made him abandon the doctrines of his youth. As for science, he says that naturalists make us understand that in science nothing is of value except facts established through strictly objective observation and the conclusions based on such facts—this is a lesson that he thinks many of his colleagues would do well to take to heart. There can be no doubt that Schleicher in his practice followed a much more rigorous and sober method than his predecessors, and that his *Compendium* in that respect stands far above Bopp's *Grammar*. In his general reasonings on the nature of language, on the other hand, Schleicher did not always follow the strict principles of sober criticism, being, as we shall now see, too dependent on Hegelian philosophy, and also on certain dogmatic views that he had inherited from previous German linguists, from Schlegel downwards.

The Introductions to Schleicher's two first volumes are entirely Hegelian, though with a characteristic difference, for in the first he says that the changes to be seen in the realm of languages are decidedly historical and in no way resemble the changes that we may observe in nature, for "however manifold these may be, they never show anything but a circular course that repeats itself continually" (Hegel), while in language, as in everything mental, we may see new things that have never existed before. One generation of animals or plants is like another; the skill of animals has no history, as human art has; language is specifically human and mental: its development is therefore analogous to history, for in

both we see a continual progress to new phases. In Schleicher's second volume, however, this view is expressly rejected in its main part, because Schleicher now wants to emphasize the natural character of language: it is true, he now says, that language shows a 'werden' which may be termed history in the wider sense of this word, but which is found in its purest form in nature; for instance, in the growing of a plant. Language belongs to the natural sphere, not to the sphere of free mental activity and this must be our starting-point if we would discover the method of linguistic science (ii. 21).

It would, of course, be possible to say that the method of linguistic science is that of natural science, and yet to maintain that the object of linguistics is different from that of natural science, but Schleicher more and more tends to identify the two, and when he was attacked for saying, in his pamphlet on the Darwinian theory, that languages were material things, real natural objects, he wrote in defence *Ueber die bedeutung der sprache für die naturgeschichte des menschen*, which is highly characteristic as the culminating point of the materialistic way of looking at languages. The activity, he says, of any organ, e.g. one of the organs of digestion, or the brain or muscles, is dependent on the constitution of that organ. The different ways in which different species, nay even different individuals, walk are evidently conditioned by the structure of the limbs; the activity or function of the organ is, as it were, nothing but an aspect of the organ itself, even if it is not always possible by means of the knife or microscope of the scientist to demonstrate the material cause of the phenomenon. What is true of the manner of walking is true of language as well; for language is nothing but the result, perceptible through the ear, of the action of a complex of material substances in the structure of the brain and of the organs of speech, with their nerves, bones, muscles, etc. Anatomists, however, have not yet been able to demonstrate differences in the structures of these organs corresponding to differences of nationality—to discriminate, that is, the organs of a Frenchman (*quâ* Frenchman) from those of a German (*quâ* German). Accordingly, as the chemist can only arrive at the elements which compose the sun by examining the light which it emits, while the source of that light remains inaccessible to him, so must we be content to study the nature of languages, not in their material antecedents but in their audible manifestations. It makes no great difference, however, for "the two things stand to each other as cause and effect, as substance and phenomenon: a philosopher [i.e. a Hegelian] would say that they are identical."

Now I, for one, fail to understand how this can be what Schleicher believes it to be, "a refutation of the objection that language is

nothing but a consequence of the activity of these organs." The sun exists independently of the human observer; but there could be no such thing as language if there was not besides the speaker a listener who might become a speaker in his turn. Schleicher speaks continually in his pamphlet as if structural differences in the brain and organs of speech were the real language, and as if it were only for want of an adequate method of examining this hidden structure that we had to content ourselves with studying language in its outward manifestation as audible speech. But this is certainly on the face of it preposterous, and scarcely needs any serious refutation. If the proof of the pudding is in the eating, the proof of a language must be in the hearing and understanding; but in order to be heard words must first be spoken, and in these two activities (that of producing and that of perceiving sounds) the real essence of language must consist, and these two activities are the primary (or why not the exclusive ?) object of the science of language.

Schleicher goes on to meet another objection that may be made to his view of the 'substantiality of language,' namely, that drawn from the power of learning other languages. Schleicher doubts the possibility of learning another language to perfection; he would admit this only in the case of a man who exchanged his mother-tongue for another in his earliest youth; "but then he becomes by that very fact a different being from what he was: brain and organs of speech develop in another direction." If Mr. So-and-So is said to speak and write German, English and French equally well, Schleicher first inclines to doubt the fact; and then, granting that the same individual may "be at the same time a German, a Frenchman and an Englishman," he asks us to remember that all these three languages belong to the same family and may, from a broader point of view, be termed species of the same language; but he denies the possibility of anyone's being equally at home in Chinese and German, or in Arabic and Hottentot, etc., because these languages are totally different in their innermost essence. (But what of bilingual children in Finland, speaking Swedish and Finnish, or in Greenland, speaking Danish and Eskimo, or in Java, speaking Dutch and Malay ?) Schleicher has to admit that our organs are to some extent flexible and capable of acquiring activities that they had not at first; but one definite function is and remains nevertheless the only natural one, and thus "the possibility of a man's acquiring foreign languages more or less perfectly is no objection to our seeing the material basis of language in the structure of the brain and organs of speech."

Even if we admit that Schleicher is so far right that in nearly all (or all ?) cases of bilingualism one language comes more naturally

than the other, he certainly exaggerates the difference, which is always one of degree ; and at any rate his final conclusion is wrong, for we might with the same amount of justice say that a man who has first learned to play the piano has acquired the structure of brain and fingers peculiar to a pianist, and that it is then unnatural for him also to learn to play the violin, because that would imply a different structure of these organs. In all these cases we have to do with a definite proficiency or skill, which can only be obtained by constant practice, though of course one man may be better predisposed by nature for it than another ; but then it is also the fact that people who speak no foreign language attain to very different degrees of proficiency in the use of their mother-tongue. It cannot be said too emphatically that we have here a fundamental question, and that Schleicher's view can never lead to a true conception of what language is, or to a real insight into its changes and historical development.

Schleicher goes on to say that the classification of mankind into races should not be based on the formation of the skull or on the character of the hair, or any such external criteria, as they are by no means constant, but rather on language, because this is a thoroughly constant criterion. This alone would give a perfectly natural system, one, for instance, in which all Turks would be classed together, while otherwise the Osmanli Turk belongs to the 'Caucasian' race and the so-called Tataric Turks to the 'Mongolian' race; on the other hand, the Magyar and the Basque are not physically to be distinguished from the Indo-European, though their languages are widely dissimilar. According to Schleicher, therefore, the natural system of languages is also the natural system of mankind, for language is closely connected with the whole higher life of men, which is therefore taken into consideration in and with their language. In this book I am not concerned with the ethnographical division of mankind into races, and I therefore must content myself with saying that the very examples adduced by Schleicher seem to me to militate against his theory that a division of mankind based on language is the natural one : are we to reckon the Basque's son, who speaks nothing but French (or Spanish) as belonging to a different race from his father ? And does not Schleicher contradict himself when on p. 16 he writes that language is "ein völlig constantes merkmal," and p. 20 that it is "in fortwährender veränderung begriffen" ? So far as I see, Schleicher never expressly says that he thinks that the physical structure conditioning the structure of a man's language is hereditary, though some of his expressions point that way, and that may be what he means by the expression 'constant.' In other places (Darw. 25, Bed. 24) he allows external conditions

of life to exercise some influence on the character of a language, as when languages of neighbouring peoples are similar (Aryans and Semites, for example, are the only nations possessing flexional languages). On such points, however, he gives only a few hints and suggestions.

III.—§ 5. Classification of Languages.

In the question of the classification of languages Schleicher introduces a deductive element from his strong preoccupation with Hegelian ideas. Hegel everywhere moves in trilogies; Schleicher therefore must have three classes, and consequently has to tack together two of Pott's four classes (agglutinating and incorporating); then he is able philosophically to deduce the tripartition. For language consists in *meaning* (bedeutung; matter, contents, root) and *relation* (beziehung; form), tertium non datur. As it would be a sheer impossibility for a language to express form only, we obtain three classes:

I. Here meaning is the only thing indicated by sound; relation is merely suggested by word-position: isolating languages.

II. Both meaning and relation are expressed by sound, but the formal elements are visibly tacked on to the root, which is itself invariable: agglutinating languages.

III. The elements of meaning and of relation are fused together or absorbed into a higher unity, the root being susceptible of inward modification as well as of affixes to denote form: flexional languages.

Schleicher employs quasi-mathematical formulas to illustrate these three classes: if we denote a root by R, a prefix by p and a suffix by s, and finally use a raised x to denote an inner modification, we see that in the isolated languages we have nothing but R (a sentence may be represented by $R\ R\ R\ R\ldots$), a word in the second class has the formula $R\ s$ or $p\ R$ or $p\ R\ s$, but in the third class we may have $p\ R^x\ s$ (or $R^x\ s$).

Now, according to Schleicher the three classes of languages are not only found simultaneously in the tongues of our own day, but they represent three stages of linguistic development; "to the *nebeneinander* of the system corresponds the *nacheinander* of history." Beyond the flexional stage no language can attain; the symbolic denotation of relation by flexion is the highest accomplishment of language; speech has here effectually realized its object, which is to give a faithful phonetic image of thought. But before a language can become flexional it must have passed through an isolating and an agglutinating period. Is this theory borne out by historical facts? Can we trace back

any of the existing flexional languages to agglutination and isolation? Schleicher himself answers this question in the negative: the earliest Latin was of as good a flexional type as are the modern Romanic languages. This would seem a sort of contradiction in terms; but the orthodox Hegelian is ready with an answer to any objection; he has the word of his master that History cannot begin till the human spirit becomes "conscious of its own freedom," and this consciousness is only possible after the complete development of language. The formation of Language and History are accordingly successive stages of human activity. Moreover, as history and historiography, i.e. literature, come into existence simultaneously, Schleicher is enabled to express the same idea in a way that "is only seemingly paradoxical," namely, that the development of language is brought to a conclusion as soon as literature makes its appearance; this is a crisis after which language remains fixed; language has now become a means, instead of being the aim, of intellectual activity. We never meet with any language that is developing or that has become more perfect; in historical times all languages move only downhill; linguistic history means decay of languages as such, subjugated as they are through the gradual evolution of the mind to greater freedom.

The reader of the above survey of previous classifications will easily see that in the matter itself Schleicher adds very little of his own. Even the expressions, which are here given throughout in Schleicher's own words, are in some cases recognizable as identical with, or closely similar to, those of earlier scholars.

He made one coherent system out of ideas of classification and development already found in others. What is new is the philosophical substructure of Hegelian origin, and there can be no doubt that Schleicher imagined that by this addition he contributed very much towards giving stability and durability to the whole system. And yet this proved to be the least stable and durable part of the structure, and as a matter of fact the Hegelian reasoning is not repeated by a single one of those who give their adherence to the classification. Nor can it be said to carry conviction, and undoubtedly it has seemed to most linguists at the same time too rigid and too unreal to have any importance.

But apart from the philosophical argument the classification proved very successful in the particular shape it had found in Schleicher. Its adoption into two such widely read works as Max Müller's and Whitney's Lectures on the Science of Language contributed very much to the popularity of the system, though the former's attempt at ascribing to the tripartition a sociological

importance by saying that juxtaposition (isolation) is characteristic of the 'family stage,' agglutination of 'the nomadic stage' and amalgamation (flexion) of the 'political stage' of human society was hardly taken seriously by anybody.

The chief reasons for the popularity of this classification are not far to seek. It is easy of handling and appeals to the natural fondness for clear-cut formulas through its specious appearance of regularity and rationality. Besides, it flatters widespread prejudices in so far as it places the two groups of languages highest that are spoken by those nations which have culturally and religiously exercised the deepest influence on the civilization of the world, Aryans and Semites. Therefore also Pott's view, according to which the incorporating or 'polysynthetic' American languages possess the same characteristics that distinguish flexion as against agglutination, only in a still higher degree, is generally tacitly discarded, for obviously it would not do to place some languages of American Indians higher than Sanskrit or Greek. But when these are looked upon as the very flower of linguistic development it is quite natural to regard the modern languages of Western Europe as degenerate corruptions of the ancient more highly flexional languages; this is in perfect keeping with the prevalent admiration for classical antiquity and with the belief in a far past golden age. Arguments such as these may not have been consciously in the minds of the framers of the ordinary classification, but there can be no doubt that they have been unconsciously working in favour of the system, though very little thought seems to be required to show the fallacy of the assumption that high civilization has any intrinsic and necessary connexion with the *grammatical* construction of the language spoken by the race or nation concerned. No language of modern Europe presents the flexional type in a purer shape than Lithuanian, where we find preserved nearly the same grammatical system as in old Sanskrit, yet no one would assert that the culture of Lithuanian peasants is higher than that of Shakespeare, whose language has lost an enormous amount of the old flexions. Culture and language must be appraised separately, each on its own merits and independently of the other.

From a purely linguistic point of view there are many objections to the usual classification, and it will be well here to bring them together, though this will mean an interruption of the historical survey which is the main object of these chapters.

First let us look upon the tripartition as purporting a comprehensive classification of languages as existing side by side without any regard to historic development (the *nebeneinander*

of Schleicher). Here it does not seem to be an ideal manner of classifying a great many objects to establish three classes of such different dimensions that the first comprises only Chinese and some other related languages of the Far East, and the third only two families of languages, while the second includes hundreds of unrelated languages of the most heterogeneous character. It seems certain that the languages of Class I represent one definite type of linguistic structure, and it may be that Aryan and Semitic should be classed together on account of the similarity of their structure, though this is by no means quite certain and has been denied (by Bopp, and in recent times by Porzezinski); but what is indubitable is that the 'agglutinating' class is made to comprehend languages of the most diverse type, even if we follow Pott and exclude from this class all incorporating languages. Finnish is always mentioned as a typically agglutinative language, yet there we meet with such declensional forms as nominative *vesi* 'water,' *toinen* 'second,' partitive *vettä*, *toista*, genitive *veden*, *toisen*, and such verbal forms as *sido-n* 'I bind,' *sido-t* 'thou bindest,' *sito-o* 'he binds,' and the three corresponding persons in the plural, *sido-mme*, *sido-tte*, *sito-vat*. Here we are far from having one unchangeable root to which endings have been glued, for the root itself undergoes changes before the endings. In Kiyombe (Congo) the perfect of verbs is in many cases formed by means of a vowel change that is a complete parallel to the apophony in English *drink*, *drank*, thus *vanga* 'do,' perfect *venge*, *twala* 'bring,' perfect *twele* or *twede*, etc. (*Anthropos*, ii. p. 761). Examples like these show that flexion, in whatever way we may define this term, is not the prerogative of the Aryans and Semites, but may be found in other nations as well. 'Agglutination' is either too vague a term to be used in classification, or else, if it is taken strictly according to the usual definition, it is too definite to comprise many of the languages which are ordinarily reckoned to belong to the second class.

It will be seen, also, that those writers who aim at giving descriptions of a variety of human tongues, or of them all, do not content themselves with the usual three classes, but have a greater number. This began with Steinthal, who in various works tried to classify languages partly from geographical, partly from structural points of view, without, however, arriving at any definite or consistent system. Friedrich Müller, in his great *Grundriss der Sprachwissenschaft*, really gives up the psychological or structural division of languages, distributing the more than hundred different languages that he describes among twelve races of mankind, characterized chiefly by external criteria that have nothing to do with language. Misteli establishes six main types: I. Incorporating. II. Root-

isolating. III. Stem-isolating. IV. Affixing (Anreihende). V. Agglutinating. VI. Flexional. These he also distributes so as to form four classes: (1) languages with sentence-words: I; (2) languages with no words: II, III and IV; (3) languages with apparent words: V; and (4) languages with real words: VI. But the latter division had better be left alone; it turns on the intricate question "What constitutes a word?" and ultimately depends on the usual depreciation of 'inferior races' and corresponding exaltation of our own race, which is alone reputed capable of possessing 'real words.' I do not see why we should not recognize that the vocables of Greenlandic, Malay, Kafir or Finnish are just as 'real' words as any in Hebrew or Latin.

Our final result, then, is that the tripartition is insufficient and inadequate to serve as a comprehensive classification of languages actually existing. Nor shall we wonder at this if we see the way in which the theory began historically in an *obiter dictum* of Fr. v. Schlegel at a time when the inner structure of only a few languages had been properly studied, and if we consider the lack of clearness and definiteness inherent in such notions as agglutination and flexion, which are nevertheless made the corner-stones of the whole system. We therefore must go back to the wise saying of Humboldt quoted on p. 59, that the structural diversities of languages are too great for us to classify them comprehensively.

In a subsequent part of this work I shall deal with the tripartition as representing three successive stages in the development of such languages as our own (the *nacheinander* of Schleicher), and try to show that Schleicher's view is not borne out by the facts of linguistic history, which give us a totally different picture of development.

From both points of view, then, I think that the classification here considered deserves to be shelved among the hasty generalizations in which the history of every branch of science is unfortunately so rich.

III.—§ 6. Reconstruction.

Probably Schleicher's most original and important contribution to linguistics was his reconstruction of the Proto-Aryan language, *die indogermanische ursprache*. The possibility of inferentially constructing this parent language, which to Sanskrit, Greek, Latin, Gothic, etc., was what Latin was to Italian, Spanish, French, etc., was early in his thoughts (see quotations illustrating the gradual growth of the idea in Oertel, p. 39 f.), but it was not till the first edition of his *Compendium* that he carried it out in

detail, giving there for each separate chapter (vowels, consonants, roots, stem-formation, declension, conjugation) first the Proto-Aryan forms and then those actually found in the different languages, from which the former were inferred. This arrangement has the advantage that the reader everywhere sees the historical evolution in the natural order, beginning with the oldest and then proceeding to the later stages, just as the Romanic scholar begins with Latin and then takes in successive stages Old French, Modern French, etc. But in the case of Proto-Aryan this procedure is apt to deceive the student and make him take these primitive forms as something certain, whose existence reposes on just as good evidence as the forms found in Sanskrit literature or in German or English as spoken in our own days. When he finds some forms given first and used to *explain* some others, there is some danger of his forgetting that the forms given first have a quite different status to the others, and that their only *raison d'être* is the desire of a modern linguist to explain existing forms in related languages which present certain similarities as originating from a common original form, which he does not find in his texts and has, therefore, to reconstruct. But apart from this there can be no doubt that the reconstruction of older forms (and the ingenious device, due to Schleicher, of denoting such forms by means of a preposed asterisk to distinguish them from forms actually found) has been in many ways beneficial to historical grammar. Only it may be questioned whether Schleicher did not go too far when he wished to base the whole grammar of all the Aryan languages on such reconstructions, instead of using them now and then to explain single facts.

Schleicher even ventured (and in this he seems to have had no follower) to construct an entire little fable in primitive Aryan: see "Eine fabel in indogermanischer ursprache," *Beiträge zur vergl. sprachforschung*, 5. 206 (1868). In the introductory remarks he complains of the difficulty of such attempts, chiefly because of the almost complete lack of particles capable of being inferred from the existing languages, but he seems to have entertained no doubt about the phonetic and grammatical forms of the words he employed. As the fable is not now commonly known, I give it here, with Schleicher's translation, as a document of this period of comparative linguistics.

AVIS AKVASAS KA

Avis, jasmin varna na ā ast, dadarka akvams, tam, vāgham garum vaghantam, tam, bhāram magham, tam, manum āku bharantam. Avis akvabhjams ā vavakat: kard aghnutai mai vidanti manum akvams agantam.

Akvāsas ā vavakant: krudhi avai, kard aghnutai vividvant-svas: manus patis varnām avisāms karnanti svabhjam gharmam vastram avibhjams ka varnā na asti.

Tat kukruvants avis agram ā bhugat.

[DAS] SCHAF UND [DIE] ROSSE

[Ein] schaf, [auf] welchem wolle nicht war (ein geschorenes schaf) sah rosse, das [einen] schweren wagen fahrend, das [eine] grosse last, das [einen] menschen schnell tragend. [Das] schaf sprach [zu den] rossen: [Das] herz wird beengt [in] mir (es thut mir herzlich leid), sehend [den] menschen [die] rosse treibend.

[Die] rosse sprachen: Höre schaf, [das] herz wird beengt [in den] gesehen-habenden (es thut uns herzlich leid, da wir wissen): [der] mensch, [der] herr macht [die] wolle [der] schafe [zu einem] warmen kleide [für] sich und [den] schafen ist nicht wolle (die schafe aber haben keine wolle mehr, sie werden geschoren; es geht ihnen noch schlechter als den rossen).

Dies gehört habend bog (entwich) [das] schaf [auf das] feld (es machte sich aus dem staube).

The question here naturally arises: Is it possible in the way initiated by Schleicher to reconstruct extinct linguistic stages, and what degree of probability can be attached to the forms thus created by linguists? The answer certainly must be that in some instances the reconstruction may have a very strong degree of probability, namely, if the data on which it is based are unambiguous and the form to be reconstructed is not far removed from that or those actually found; but that otherwise any reconstruction becomes doubtful, and naturally the more so according to the extent of the reconstruction (as when a whole text is constructed) and to the distance in time that intervenes between the known and the unknown stage. If we look at the genitives of Lat. *genus* and Gr. *génos*, which are found as *generis* and *génous*, it is easy to see that both presuppose a form with *s* between two vowels, as we see a great many intervocalic *s*'s becoming *r* in Latin and disappearing in Greek; but when Schleicher gives as the prototype of both (and of corresponding forms in the other languages) Aryan *ganasas*, he oversteps the limits of the permissible in so far as he ascribes to the vowels definite sounds not really warranted by the known forms. If we knew the modern Scandinavian languages and English only, we should not hesitate to give to the Proto-Gothonic genitive of the word for 'mother' the ending *-s*, cf. Dan. *moders*, E. *mother's*; but G. *der mutter* suffices to show that the conclusion is not safe, and as a matter of fact, both in Old Norse and in Old English the genitive of this

word is without an *s*. An analogous case is presented when Schleicher reconstructs the nom. of the word for 'father' as *patars*, because he presupposes *-s* as the invariable sign of every nom. sg. masc., although in this particular word not a single one of the old languages has *-s* in the nominative. All Schleicher's reconstructions are based on the assumption that Primitive Aryan had a very simple structure, only few consonant and fewer vowel sounds, and great regularity in morphology; but, as we shall see, this assumption is completely gratuitous and was exploded only a few years after his death. Gabelentz (Spr 182), therefore, was right when he said, with a certain irony, that the Aryan *ursprache* had changed beyond recognition in the short time between Schleicher and Brugmann. The moral to be drawn from all this seems to be that hypothetical and starred forms should be used sparingly and with the extremest caution.

With regard to inferential forms denoted by a star, the following note may not be out of place here. Their purely theoretical character is not always realized. An example will illustrate what I mean. If etymological dictionaries give as the origin of F. *ménage* (OF. *maisnage*) a Latin form **mansionaticum*, the etymology may be correct although such a Latin word may never at any time have been uttered. The word was framed at some date, no one knows exactly when, from the word which at various times had the forms (acc.) *mansionem*, **masione*, *maison*, by means of the ending which at first had the form *-aticum* (as in *viaticum*), and finally (through several intermediate stages) became *-age*; but at what stage of each the two elements met to make the word which eventually became *ménage*, no one can tell, so that the only thing really asserted is that *if* the word had been formed at a very early date (which is far from probable) it would have been *mansionaticum*. It would, therefore, perhaps be more correct to say that the word is from *mansione* + *-aticum*.

III.—§ 7. Curtius, Madvig, and Specialists.

Second only to Schleicher among the linguists of those days was Georg Curtius (1820–85), at one time his colleague in the University of Prague. Curtius's special study was Greek, and his books on the Greek verb and on Greek etymology cleared up a great many doubtful points; he also contributed very much to bridge the gulf between classical philology and Aryan linguistics. His views on general questions were embodied in the book *Zur Chronologie der indogermanischen Sprachforschung* (1873). While Schleicher died when his fame was at its highest and his theories were seemingly victorious in all the leading circles, Curtius had

the misfortune to see a generation of younger men, including some of his own best disciples, such as Brugmann, advance theories that seemed to him to be in conflict with the most essential principles of his cherished science; and though he himself, like Schleicher, had always been in favour of a stricter observance of sound-laws than his predecessors, his last book was a polemic against those younger scholars who carried the same point to the excess of admitting no exceptions at all, who believed in innumerable analogical formations even in the old languages, and whose reconstructions of primitive forms appeared to the old man as deprived of that classical beauty of the *ursprache* which was represented in his own and Schleicher's works (*Zur Kritik der neuesten Sprachforschung*, 1885). But this is anticipating.

If Curtius was a comparativist with a sound knowledge of classical philology, Johan Nikolai Madvig was pre-eminently a classical philologist who took a great interest in general linguistics and brought his critical acumen and sober common sense to bear on many of the problems that exercised the minds of his contemporaries. He was opposed to everything of a vague and mystical nature in the current theories of language and disliked the tendency of some scholars to find deep-lying mysterious powers at the root of linguistic phenomena. But he probably went too far in his rationalism, for example, when he entirely denied the existence of the sound-symbolism on which Humboldt had expatiated. He laid much stress on the identity of the linguistic faculty in all ages: the first speakers had no more intention than people to-day of creating anything systematic or that would be good for all times and all occasions—they could have no other object in view than that of making themselves understood at the moment; hence the want of system which we find everywhere in languages: a different number of cases in singular and plural, different endings, etc. Madvig did not escape some inconsistencies, as when he himself would explain the use of the soft vowel *a* to denote the feminine gender by a kind of sound-symbolism, or when he thought it possible to determine in what order the different grammatical ideas presented themselves to primitive man (tense relation first in the verb, number before case in the noun). He attached too little value to phonological and etymological research, but on the whole his views were sounder than many which were set forth on the same subjects at the time; his papers, however, were very little known, partly because they were written in Danish, partly because his style was extremely heavy and difficult, and when he finally brought out his *Kleine philologische schriften* in German (1875), he expressed his regret in the preface at finding that many of the theories he had put forward years before in Danish

had in the meantime been independently arrived at by Whitney, who had had the advantage of expressing them in a world-language.

One of the most important features of the period with which we are here dealing is the development of a number of special branches of historical linguistics on a comparative basis. Curtius's work on Greek might be cited as one example; in the same way there were specialists in Sanskrit (Westergaard and Benfey among others), in Slavonic (Miklosich and Schleicher), in Keltic (Zeuss), etc. Grimm had numerous followers in the Gothonic or Germanic field, while in Romanic philology there was an active and flourishing school, headed by Friedrich Diez, whose *Grammatik der romanischen Sprachen* and *Etymologisches Wörterbuch der romanischen Sprachen* were perhaps the best introduction to the methodical study of linguistics that anyone could desire; the writer of these lines looks back with the greatest gratitude to that period of his youth when he had the good fortune to make the acquaintance of these truly classical works. Everything was so well arranged, so carefully thought out and so lucidly explained, that one had everywhere the pleasant feeling that one was treading on firm ground, the more so as the basis of the whole was not an artificially constructed nebulous *ursprache*, but the familiar forms and words of an historical language. Here one witnessed the gradual differentiation of Latin into seven or eight distinct languages, whose development it was possible to follow century by century in well-authenticated texts. The picture thus displayed before one's eyes of actual linguistic growth in all domains—sounds, forms, word-formation, syntax—and (a very important corollary) of the interdependence of these domains, could not but leave a very strong impression—not merely enthusiasm for what had been achieved here, but also a salutary skepticism of theories in other fields which had not a similarly solid basis.

III.—§ 8. Max Müller and Whitney.

Working, as we have seen, in many fields, linguists had now brought to light a shoal of interesting facts affecting a great many languages and had put forth valuable theories to explain these facts; but most of their work remained difficult of access except to the specialist, and very little was done by the experts to impart to educated people in general those results of the new science which might be enjoyed without deeper study. But in 1861 Max Müller gave the first series of those *Lectures on the Science of Language* which, in numerous editions, did more than anything else to popularize linguistics and served to initiate a great many students into our science. In many ways these lectures were

isolating. III. Stem-isolating. IV. Affixing (Anreihende). V. Agglutinating. VI. Flexional. These he also distributes so as to form four classes: (1) languages with sentence-words: I; (2) languages with no words: II, III and IV; (3) languages with apparent words: V; and (4) languages with real words: VI. But the latter division had better be left alone; it turns on the intricate question "What constitutes a word?" and ultimately depends on the usual depreciation of 'inferior races' and corresponding exaltation of our own race, which is alone reputed capable of possessing 'real words.' I do not see why we should not recognize that the vocables of Greenlandic, Malay, Kafir or Finnish are just as 'real' words as any in Hebrew or Latin.

Our final result, then, is that the tripartition is insufficient and inadequate to serve as a comprehensive classification of languages actually existing. Nor shall we wonder at this if we see the way in which the theory began historically in an *obiter dictum* of Fr. v. Schlegel at a time when the inner structure of only a few languages had been properly studied, and if we consider the lack of clearness and definiteness inherent in such notions as agglutination and flexion, which are nevertheless made the corner-stones of the whole system. We therefore must go back to the wise saying of Humboldt quoted on p. 59, that the structural diversities of languages are too great for us to classify them comprehensively.

In a subsequent part of this work I shall deal with the tripartition as representing three successive stages in the development of such languages as our own (the *nacheinander* of Schleicher), and try to show that Schleicher's view is not borne out by the facts of linguistic history, which give us a totally different picture of development.

From both points of view, then, I think that the classification here considered deserves to be shelved among the hasty generalizations in which the history of every branch of science is unfortunately so rich.

III.—§ 6. Reconstruction.

Probably Schleicher's most original and important contribution to linguistics was his reconstruction of the Proto-Aryan language, *die indogermanische ursprache.* The possibility of inferentially constructing this parent language, which to Sanskrit, Greek, Latin, Gothic, etc., was what Latin was to Italian, Spanish, French, etc., was early in his thoughts (see quotations illustrating the gradual growth of the idea in Oertel, p. 39 f.), but it was not till the first edition of his *Compendium* that he carried it out in

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